Introductory Lecture

TO THE

COURSE OF SURGERY

IN THE

UNIVERSITY OF EDINBURGH.

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BY JOHN CHIENE, M.D. EDIN.,

PROFESSOR OF SURGERY IN THE UNIVERSITY.

(*Concluded from p. 698.*)

I WOULD now direct your attention to a paper by Joseph Lister, in THE LANCET, March 16th, 1867. The paper is entitled, "A New Method of Treating Compound Fractures, Abscesses, &c." Lister, in this his first paper on the subject, gives us the keynote to the position which he then took up, and to which he has ever since strictly adhered. In that paper, after pointing out that the decomposition which occurs in a compound fracture is due to the access of the atmosphere, he says, "We find that a flood of light has been thrown upon this most important subject by the philosophic researches of M. Pasteur, who has demonstrated, by thoroughly convincing evidence, that it is not to its oxygen, or to any of its gaseous constituents, but to minute particles suspended in it, long regarded as merely accidental concomitants of putrescence, but now shown by Pasteur to be its essential cause." He then adds, "All that is requisite is to dress the wound with some material capable of killing these septic germs." Here, then, it will be noted that Lister from the first adopted Pasteur's law as the basis of his practice, and having adopted this law, he then searched out a substance by which he hoped to attain his object. He tells us that in 1864 he was much struck by the advantages obtained by mixing carbolic acid with the sewage of the town of Carlisle. This knowledge encouraged him to try carbolic acid. It is not my intention to dwell upon the gradual development of the practical details. In March, 1865, Lister made his first attempt to form an antiseptic crust, using lint soaked in carbolic acid. This was a failure. After many anxieties and by learning a good deal more from his mistakes than from his successes, always steadfastly holding to the primary doctrine, he experimented first in Glasgow and then in Edinburgh, until in 1871 he elaborated that dressing which is now associated with his name. During all these years Lister was doing a double work; he was trying to perfect the practical details, while he was at the same time working at the germ theory, and doing very much to strengthen the scientific basis of his practice. Many are now working at the practical details. The theory has now become a law. New antiseptics are being daily introduced, and when a more reliable one than carbolic acid for general use has been discovered, no one will more gladly use it than Lister. Much harm has been done by calling his method of treatment the "carbolic acid method," the sole object which he has always had in view being not the use of any special antiseptic or any special plan of treatment, but a method which will enable the surgeon to keep his wound aseptic, from the time it is inflicted until healing has taken place.

It will perhaps be as well here to tell you that in the treatment of wounds their asepticity is only one part of the problem which the practical surgeon has to consider. Lister found that the silk ligature was a source of irritation, and hence arose the reintroduction by him of the catgut ligature. The presence of pus in an aseptic wound directed his attention to suppuration caused by tension—altogether apart from putrefaction—hence the application of free drainage to all wounds and the avoidance of suppuration from tension. The catgut ligature and free drainage directly were the outcome of a study of aseptic wounds. Do not be led into the too common error that Lister's reputation rests only on his application of Pasteur's law to surgery. His work is threefold in its strength. Do not imagine that a surgeon, in accepting Lister's teaching regarding antiseptics, thereby necessarily forgets the words of John Hunter: "The first and great requisite to the restoration of an injured part is rest." Many of the most valuable improvements that have benefited mankind have been the result of years of patient and prolonged investigation. These investigations have followed two great lines; the practical man, working by experience and observation, and gradually arriving at some idea of what should be, thinking little of the why; the scientific man, with Bacon as his model, experiment as his mistress, working little by little without any idea of the practical value of his investigations, wading like the practical mind through errors and mistakes, correcting them himself, or having them corrected for him by a future worker, until at last a time is reached when the lines of thought approach one another; then a master-mind, necessarily with both practical and scientific knowledge, able to estimate at their proper worth the value of the sum total of both lines of workers, grasps the double work, and although at first seeing dimly, he steadfastly perseveres until at last he is enabled to establish some great law which will in the future enable the practical mind to work more intelligently, the scientific mind gaining at the same time encouragement to work on, with the knowledge that each little portion of truthful scientific work will in the future bring forth practical fruit. We have a good example of this in the history of the science of astronomy. After Copernicus had shown that the sun is the centre of our universe, Kepler, by a series of calculations demonstrated the elliptical pathway of the planet Mars. A hundred years after, Newton demonstrated the reason why the planet Mars could only move in an ellipse, and showed how all the other planets necessarily followed the same law. It is well known how Adams and Leverrier, using Newton's laws, and working in their studies, told the practical astronomer that if on a certain night he would look in a certain part of the heavens he would see a new planet, which we now call Neptune. While Jenner, by acute observation, discovered vaccination, so we now find Greenfield and Pasteur working on the basis of Pasteur's law of fermentation, and demonstrating by experiment that the bacillus anthracis, which is the cause of splenic fever, can, if modified by cultivation, be inoculated into healthy animals, and give rise in them to a condition which may strictly be likened to the vaccine fever, and which prevents in them the fatal splenic fever, just as the vaccine fever prevents the fatal small-pox.

If such results have been already obtained by careful experiment, is it not legitimate to expect that before long some general law may be discovered by which the poison germs of other scourges, more nearly allied to ourselves, may be modified so as to enable us to limit in no small degree the dire effects of scarlet fever, typhus, cholera, &c.? Pasteur's law, in consequence of Lister's application, has had a revolutionary influence on surgery, there is now good evidence before us that it is doing the same for obstetrics and medicine. Do we not, as citizens, learn from what I have said to-day that it is our duty and our interest to encourage scientific work? I can imagine a visit to Pasteur's laboratory about the year 1860 by a hard-headed successful man of business, who, judging by immediate results—a rapid turn over being the essence of successful trade—would certainly ask himself the question, What possible practical good can ever come to me or to my children from this investigation? As certainly do I feel that, in this utilitarian and practical age, he would leave that laboratory impressed with the waste of energy displayed, while he would assuredly admire the patience and perseverance of the investigator. I ask this same man to go with me at the present day into an operating theatre, and he will undoubtedly, in all that he sees, be carried back to that former visit, and he will be the first to acknowledge that his former estimate was essentially short-sighted and hasty. If our countrymen could only be persuaded of the great immunity from pain, and the comparative freedom from danger which they can now command, and if it has been demonstrated that these results are directly due to scientific work, based upon experiment, then they would most certainly do everything in their power to aid in fostering the work and encouraging the worker. It must be a law that every truth will in the future bear good fruit. Let each one present remember that "we are all working together for one end, some with knowledge and design, and others without knowing what they do."

What lesson do we learn as workers from what I have said to-day? Let some time be given to the culture of the reasoning faculties, devote a certain portion of each day to self-instruction, self-questioning. Let each of us do a little piece of truthful individual work. Make a start; begin at once; get into the way of doing some special work, and like

any habit—good as well as bad—it will grow upon you. If of a practical turn, you will work by experience and observation; if of a scientific turn, you will work by experiment. Both have their value; and even if you only take up the *rôle* of an overturner of false doctrine, or even a critic of true doctrine, you will all have your use, as Marcus Aurelius says: "Men co-operate after different fashions, and even those co-operate abundantly who find fault with what happens, and those who try to oppose it and to hinder it, for the universe hath need even of such men as these."

One word of warning. The simple treatment of a wound with water dressing was, we now know, imperfect; still the majority were satisfied. Accidents, local and constitutional, were smoothed off and excused by the too common phrase, We had done our best. Let us take care that we do not fall into this error with regard to our present work. As you work, be sure to fight against any temptation which may encourage you to suppose that our knowledge is now perfect. Perfection is not of this world. Is it too much to ask for encouragement for individual work? Some years ago I tried to show that our extra-mural school—a most important factor in our system of medical education—owes very much of its success to the encouragement which is given to the individuality of its teachers, everyone of whom has chosen that subject to which he has devoted special attention. May I now say a word for the individuality of the taught? May I plead toleration and assistance for the man who desires to develop his mental individuality, who desires to concentrate his mind on some special piece of work? There is need for someone to speak out, to "use plain discourse," and to say, that if the public are to require of every candidate for any public duty a universal knowledge, the acquiring of which needs all his energies, then any power which he may originally have had of doing some special work—his individuality, his physical and mental personality—will be crushed out of him. Even our schoolboys are nowadays required to pass a certain standard, the examination system is in full force even in our infant schools. Would we not have more "lucidity" if the growth of our intellects was less fettered, simply directed, rather than pruned and trimmed, ordered to do this, forbidden to do that? Any unnecessary interference with the taught at once tells on the usefulness of the teacher. What opportunity have our schoolmasters to develop any special talent in their pupil when their energies are fully occupied in polishing all their material—good, bad, and indifferent—to one standard? The schoolmaster seems now to have little pleasure in life, he is a mill-horse working round a pivot, a mill-wheel supplied with water to do one thing—namely, polish boys. Let the public see that they take care that those to whom they entrust the education of the medical practitioner are allowed some scope for their imagination, some opportunity to develop the individuality of their students. The essentially evil feature of centralisation is its want of personality. Our medical schools still possess some personality; it will be a bad day when that is interfered with. This school to which we happily belong, will lose much of its brightness, will be hampered in its usefulness, if its teachers are compelled to degenerate into polishing machines. May I ever have before me, as an important part of my duty, the encouragement of the individuality of my students. May I be enabled ever to remember that I am dealing with men, each one of whom has some special ability, every one of whom has some special work. May I endeavour, as far as in me lies, to search out that special ability, to encourage and to direct that special work. Give me your help in the future as you have always done in the past; without your confidence I can do little, with it I will endeavour, by devotion to my duties as your teacher, to maintain the reputation of this school for honest work. Working together, let us day by day feel that something has been attempted, something has been done, and at the end of the session we will be able to look back with an inward feeling that, while far from what it should have been, some advance has been made, some problem has been solved. Remember that to everyone present a talent has been given. Let him look to it that he uses that talent aright.

A FEVER-STRICKEN CREW.—Lloyd's agent at Norfolk, Va., telegraphs that the *Marie Anne*, French brig from St. Domingo to Havre, had been towed into Norfolk, Va., by the Spanish steamer *Bellver*, with only three men on board, all the others, including the captain, having died of yellow fever.

ON

THE ACTION OF THE SALTS OF SODIUM, AMMONIUM, AND POTASSIUM.

BY SYDNEY RINGER, M.D.,

AND

HARRINGTON SAINSBURY, M.D.

THE difficulties attending the observation of the action of drugs clinically result obviously from the complexity of the phenomena presented; in like manner, the pharmacologist, so long as his investigations relate to the animal organism in its entirety, has essentially to deal with the complex. Inference under these circumstances is correspondingly difficult. If to avoid this source of error our observations be restricted to a portion of the organism, it is clear that our inferences gain in exactitude in exact proportion to the simplification effected. The difficulty now lies in the applicability of inferences so gained when we pass to conditions no longer simple. It was with this difficulty clearly in view that the experiments, the results of which will now be shortly discussed, were undertaken.

The ventricle of the frog's heart was the test tissue selected. Through such ventricle of a heart isolated from the body an artificial circulation was maintained, whilst by means of a suitable apparatus (Roy's tonometer) the contractions were registered on a revolving blackened cylinder. The particular drug used was added to the circulating fluid. We were thus able to compare the working of the drugged and undrugged ventricle under conditions, artificial it is true, but definite and under control.

The structure and function of the tissue so selected are essentially twofold: ganglionic structures and muscular fibres on the one side; rhythmic contractility on the other—i.e., rhythm and contractility. The nervous nature of rhythm may be debatable; but that contractility is muscular is certain.

On such rhythmically contracting heart the action of the salts of potassium, sodium, and ammonium is briefly as follows:—

All three arrest the ventricle in diastole; they contrast, however, in the mode of arrest. Thus, as to their action on rhythm: Potassium salts tend markedly to arrest or suspend the spontaneous contractions, whilst yet the heart may be proved to be contractile by suitable excitation. Ammonium salts show no such tendency; the heart beats, often with an increased frequency, up to the very end—i.e., as long as contractility persists. Sodium salts fit in between, but come very much nearer ammonium than potassium salts, their action on rhythm being very slight.

As to their action on contractility, we have, on the one hand, potassium and ammonium salts acting with almost equal intensity; on the other hand, a wide gap intervening, sodium salts showing but feeble action.

One other point of contrast may be mentioned, it refers to the effect of continuous faradisation. This rapidly loses its power to excite the ventricle to contraction when a potassium salt is used; not so for the other bases, and the very slight and somewhat inconstant effect for ammonium and sodium salts contrasts strongly with the uniform and marked effect of potassium salts.

Restricting ourselves to these broad lines[1] of contrast, some important points come out:—

First, an important fact—namely, that throughout the salts of potassium, sodium, ammonium, the potassium, sodium, and ammonium elements are traceable. Indeed, in these experiments they appeared to rule the effect. Quite recently,[2] in a leading article, reference is made to experiments on unstriped muscular tissue by Nothnagel; the same result was observed here, the potassium and sodium action appearing to be independent of the combination of these bases. These experiments, then, on isolated tissues would be confirmatory of the older statement by Guttmann with reference to potassium salts—namely, that they are all exactly alike in the character and intensity of their action.[3] The results, however,

[1] For further details consult papers by the authors in the Medico-Chirurgical Transactions (vol. lxv.), and in the Practitioner (Aug. 1882).

[2] THE LANCET, July, 1882.

[3] Wood's Therapeutics, third edition, p. 484.

probably represent but a partial truth. The completer statement probably should be that elements and groups of elements retain more or less of their individuality throughout their combinations, and this would surely apply to either side of a salt—the base and the acid. The value of such statement would be as a help towards classification.

Next, that under these simple conditions specified, a certain relation between potassium, sodium, and ammonium salts is manifest. Potassium standing first as most poisonous and threatening in two directions; ammonium coming next, its action being restricted to destruction of contractility; sodium coming last and ranking as but very slightly poisonous comparatively with either. These experiments, indeed, would make potassium salts some fourteen or fifteen times as poisonous as sodium salts. Is the conclusion not warranted that in their action on the muscular tissue of the ventricle, and on its intrinsic nervous apparatus, these salts will maintain a *like* relation, even though the conditions be the more complex and indefinite ones of the organism in its entirety? It is not that one would exclude action on the nerve centres, vagus, &c., from the effect witnessed on the entire organism, but that one would specify *one* from among the many factors in the equation. This relation of the salts of potassium, sodium, and ammonium has however been tested on other tissues, and found to hold—e.g., on the nervous system.[4] The results also with the entire organism show that whilst potassium salts are very poisonous, sodium salts can scarcely be made to kill.

Insistence has already been made in various quarters on the use of sodium and ammonium salts in preference to potassium salts; more especially has this been urged for the bromides.[5] (The bromide of sodium has been rather largely used in America.) Clinical evidence must obviously give the final judgment; but have we not here clear indication as to the lines on which clinical investigation should be pursued?—the suggestion being that salts of sodium should throughout be substituted for those of potassium and ammonium, till clinical evidence decide that the action of one or other of these bases is required in the particular case under treatment? This suggestion, then, is based not only on the results of experiments with the entire organism, but also on these more definite results gained from experiments on isolated tissues.

It may be added that both at the Children's Hospital, Great Ormond-street, through the kindness of Dr. Barlow, and at the Western General Dispensary, Marylebone, we have had the opportunity of trying the chlorate of sodium[6] in cases of stomatitis, with ulceration along the edges of the gums, but few cases up to the present have been collected. So far, however, the evidence in its favour is every bit as unequivocal as it is for potassium chlorate, which might be said to be one of the show drugs in therapeutics. Two of the cases gave the best kind of evidence obtainable; they were, namely, cases of relapse, and were cured by pushing the drug.

NOTE ON THE

CLINICAL CHARACTERS OF TUBERCLE IN BONE.

By WM. SCOVELL SAVORY, F.R.S.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

IT is curious on reflection to see how many striking points of analogy there are between the progress and effects of tubercle in lung and in bone. In the first place the cancellous texture of bone, which is the seat of tubercle, resembles broadly in physical characters the parenchyma of lung. A section of cancellous bone and a section of dried lung have to the naked eye a very general resemblance. The structure of both is aptly described as sponge-like, and this resemblance is drawn more closely when a mass of yellow tubercle occupies the substance of each. In both cases the spongy texture appears to be filled up and rendered solid by the infiltration of the caseous deposit. Then, too, the resemblance further appears in the halo of inflammation or increased vascularity of varying width which so often surrounds the mass. Still further is the likeness shown in the mode in which the tubercle degenerates. The included tissue is broken down and destroyed until, either by the escape or disappearance of the tubercle, a cavity is left in the cancellous bone corresponding very remarkably to a vomica in the lung. Furthermore, the likeness is extended by the relation of cancellous bone to a neighbouring joint and the relation of lung substance to the pleura. Just as pleurisy is so often set up by the disturbance of tubercle in the lung, so synovitis is often provoked by the disturbance of tubercle in adjacent bone; and just as empyema is sometimes produced by the perforation of the lung-wall and the escape of matter into the pleural cavity, so suppuration in a joint, which is too often destructive, is due to the perforation of the articular wall of bone and the escape of matter into the synovial cavity. In either case urgent symptoms are apt to supervene suddenly on comparatively latent mischief.

Then, I think, the variable progress and effect of tubercle in the lung are oftentimes repeated with singular resemblance in bone. This first struck me many years ago in studying the graphic picture which Dr. Latham drew of the various forms of phthisis in his masterly Lectures on Clinical Medicine, which, by the way, have been happily reproduced by the Sydenham Society under the editorship of Dr. Martin. Just as in lung, so in bone; the history of tubercle is sometimes that of a single formation, which passes steadily, with more or less rapidity, to destruction; sometimes that of several smaller ones simultaneously; sometimes, though this more rarely, that of a number of successive formations which pass through their stages one after another, leading in this way to a gradually extending destruction of osseous tissue. So, again, and in this I think the resemblance is most marked of all, there are in tubercle in bone phenomena very exactly corresponding to what Dr. Latham in the lung, and in the cervical glands as a more obvious illustration, has described as cases of mixed and unmixed phthisis. In one class, during the changes which tubercle, after its formation, is prone to undergo, there is only what may be called a necessary amount of inflammation excited in the surrounding texture, such as is just sufficient to accomplish the result of softening and expulsion, and which subsides as soon as that is effected. This Dr. Latham called the specific limit of the disease. In another class the inflammation provoked spreads widely and deeply beyond this, and becomes much more severe and extensive than is needful for the mere elimination of the tuberculous matter. In short, Dr. Latham's sketch might have been drawn from a study of tubercle in the head of the femur or tibia or in the tarsus or vertebræ.

Within the whole range of pathology I know no better illustration of the value of extended study, or rather of the great loss from limited views which must come of too special observation. For the study of tubercle, if the difficulty would be adequately grasped, must be carried on not only throughout the whole fields of medicine and of surgery, but here, at all events, there can and ought to be no boundary between them. For the largest purpose, the land to be explored must be common to both.

Brook-street, W.

ANOTHER NEW TEST FOR ALBUMEN.

By GEORGE JOHNSON, M.D., F.R.S.,
PROFESSOR OF CLINICAL MEDICINE AND SENIOR PHYSICIAN TO KING'S COLLEGE HOSPITAL.

MY son, G. Stillingfleet Johnson, in a paper published in the *Journal of the Chemical Society* (August, 1874) describes some compounds of albumen with the mineral acids, and gives a table showing the action of various chemical reagents in causing coagulation in solutions of these albumen compounds. He found that only two reagents besides the mineral acids cause the coagulation of albumen in solutions of all its acid compounds—namely, baric chloride and picric acid,—and he suggested to me that the latter of these two substances might be found a useful test for albumen in the urine; for while the baric chloride could not be added to normal urine without being precipitated by many of its

[4] Ringer and Murrell: Journal of Anatomy, vol. xii., p. 71. For further reference see also Wood's Therapeutics; articles Potassium Salts; also Phys. Action of Sodium and Ammonium Bromides. Third edition, 1881.

[5] See Wood's Therapeutics, Bromide of Sodium. Also paper on Epilepsy with Cardiac Complications, by W. A. Hollis, M.D., Practitioner, vol. xxii., p. 81.

[6] Through the kindness of Mr. Martindale we were provided with a pure specimen of this salt.

normal constituents—sulphates, carbonates, and phosphates—picric acid causes no precipitate in normal urine.

Acting upon my son's suggestion, I have for some months used a saturated solution of picric acid as a test for albuminous urine, with results which may be briefly stated as follows: In normal urine it has never given a precipitate or produced any other change than the slight yellow tinge due to the colour of the solution, the mixture remaining quite transparent. When heat and nitric acid, applied with the usual well-known precautions, have shown the presence of albumen, the picric acid solution has invariably caused coagulation in proportion to the amount of albumen.

Most clinical observers are agreed that one of the most delicate tests for a minute quantity of albumen consists in the addition of nitric acid to the cold urine, when a cloud appears at the junction of the two liquids. In applying this test the urine may be poured upon the acid which has been previously placed in the test tube, or the urine having been poured into the test tube, a few drops of the acid are allowed to flow down the side of the tube while held in a sloping position. It sometimes happens that when the amount of albumen is very small an interval of some minutes elapses before any change occurs at the junction of the two liquids. Now, in such cases I have found that a mixture of equal volumes of the urine and the picric acid solution has immediately become turbid with coagulated albumen. In this speedy and decided action of the test upon urine which is only slightly impregnated with albumen, the picric acid solution is superior to nitric acid. In applying this test it should be borne in mind that the picric acid saturated solution is but little heavier than distilled water, its specific gravity being about 1003; so that, unlike the heavy nitric acid, it tends when slowly poured into the tube to float on the surface of the urine, where a film of coagulated albumen forms at the junction of the two liquids. This floating film with the picric acid solution forms a pretty contrast with the film near the bottom of the test tube when nitric acid is the reagent employed. The coagulum formed with the picric acid solution in cold urine requires a very large excess of water for its solution; in fact it is about as insoluble as the coagulum produced by nitric acid. The picric acid coagulum is readily soluble in caustic potash and ammonia; if, therefore, albuminous urine be alkaline it will require to be neutralised or acidulated before applying the picric acid test; but in all my numerous testings with the picric acid I have not once found it necessary to acidulate the urine. One result, then, of my industrious son's purely scientific work at these compounds of albumen has been to supply us with a really valuable addition to our tests for albumen in the urine.

Then it has lately occurred to me, what is obvious enough when once attention is directed to it, that for a saturated solution of picric acid the crystals or the powder may sometimes be substituted with advantage. A small crystal added to the albuminous urine quickly dissolves and as quickly coagulates the albumen. The crystals are permanent in the air, and may be kept for any length of time without undergoing change; and I venture to predict that a few of these crystals in a small bottle will speedily take the place of nitric acid, whether in sealed tubes or in bottles, in all urinary test cases which are made for carrying in the pocket. With picric acid powder or crystals in one bottle, and Cooper and Fehling's test pellets in another, the most complete urinary test case need contain no other liquid than the spirit in a small tubular spirit lamp. I have for some years carried in my case nitric acid in a well-stoppered and capped bottle, and then enclosed in a boxwood box; but I now with a sense of relief replace the destructive liquid acid for the entirely harmless solid.

Since the preceding was written I have met with two specimens of urine suspected to be albuminous, in which picric acid caused a decided opalescence, while nitric acid only darkened the colour of the urine. I am therefore confident that in some cases picric acid will prove to be a more delicate test for a mere trace of albumen than nitric acid. In the solid form the powdered picric acid has this advantage over the crystals, that it dissolves more rapidly.

Savile-row, W.

DR. SEDGWICK SAUNDERS, the Medical Officer of Health for the City, in his report last week, stated that of 302 houses, thirteen required sanitary improvement.

DR. J. C. NUNAN has been elected chairman of the Kinsale Town Commissioners.

RUPTURE OF THE URINARY BLADDER.

BY WALTER RIVINGTON, F.R.C.S. ENG.,
SURGEON TO THE LONDON HOSPITAL.

PART III.

REPORTED CASES OF RECOVERY AND TREATMENT.

THE reported cases of recovery after rupture of the urinary bladder with which I am acquainted are twenty-six in number, and may be arranged as follows:—

1. Partial or subperitoneal ruptures. One case under Mr. Keal.

2. Extra-peritoneal ruptures. (*a*) Rupture into the vagina. Three cases under Wilkinson, Earle,[1] and a friend of Dr. Blundell's[2] respectively. (*b*) Rupture into the rectum. Two cases under Ward[3] and Call[4] respectively. (*c*) Perforations by splinters of bone. Four cases under Astier, Eve, Townsend, and Thompson respectively, to be found in Dr. Max Bartels' paper. (*d*) Ruptures into the perivesical connective tissue. Eight cases under Syme,[5] Porter,[6] Walker,[7] Padley,[8] Rose,[9] Max Bartels,[10] Berner,[11] and Jeanmaire[12] respectively; and to these I might add a case which came under my own observation.

3. Intra-peritoneal ruptures. Eight cases reported respectively by Walter,[13] Le Gros Clark,[14] Erskine Mason,[15] Thorp,[16] McDougall[17] (two cases), Morris,[18] and Chaldecott.[19]

Partial or subperitoneal ruptures may be more common than is generally supposed, and Mr. Keal's case requires no comment.

In the examples of rupture into the vagina, distended and neglected bladders gave way in consequence of the accession of labour and the use of instruments. The rents were in a most favourable situation, and in this class of cases there is nothing to militate against recovery.

Of the rectal cases, one (Ward's) was secondary from sloughing, and the other (Call's) appears to me to have been probably a rupture of the membranous urethra into the rectum. Such communications are sometimes met with in cases of stricture.

The cases of perforation of the bladder by fragments of bone are only included because they appear in Max Bartels' list. Splinters from fractures of the pelvis pierced the bladder. In one case a splinter came from the urethra; in the others the splinters became encrusted with phosphates, and were removed by lithotomy after the lapse of months or years.

Six of the extra-peritoneal ruptures (Syme, Porter, Rose, Max Bartels, Berner, and Jeanmaire) are undoubtedly genuine instances of recovery after traumatic effusion of urine into the perivesical connective tissue, and require no comment. Mr. Padley's case was not traumatic. The patient had a tight stricture, and urine appears to have escaped from the bladder in consequence of a syphilitic ulcer perforating the wall of the viscus. Of the genuineness of Dr. Walker's case I am far from convinced, and the second-hand report of the case to which I have alone had access is so brief that I reserve a final judgment. A man, twenty-three years of age, had been crushed between an engine and a car. His bladder is *said* to have been distended. A tumour appeared anteriorly, which subsided when the catheter was used. A rupture of the anterior wall of the bladder was diagnosed, and lateral cystotomy was performed with subsidence of the freshly accumulated tumour, and tenderness. Improvement and rapid convalescence followed, and in fifty-five days the patient resumed his occupation. In the absence of clear

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1 THE LANCET, June 27th, 1829.
2 Lectures, THE LANCET, Feb. 28th, 1829, p. 677.
3 New York Lancet, vol. I., 1847. 4 THE LANCET, Dec. 10th, 1881.
5 Contributions to the Pathology and Practice of Surgery, p. 332.
6 Rynd on Strictures, p. 48.
7 Med. Com. Massachusetts Med. Soc., art. iv., case 6, vol. viii., 1845, quoted in Erskine Mason's paper. The original is not accessible.
8 THE LANCET, March 4th, 1882.
9, 10, 11, 12 See Max Bartels' paper, op. cit.
13 Ranking's Abstract, 1862, vol. ii.; and Philadelphia Medical and Surgical Reporter. I have only been able to refer to Ranking's Abstract.
14 Op. cit. 15 New York Medical Journal, 1872.
16 Dublin Quarterly Journal, vol. xlvi., p. 306.
17 Edinburgh Medical Journal, Jan. 1877.
18 Medical Times and Gazette, Nov. 1879.
19 Provincial Medical and Surgical Journal, 1846.

evidence that the bladder was distended at the time of the accident this case is open to grave doubt. If urine had escaped from the bladder into the perivesical connective tissue, immunity from suppuration and sloughing could not be expected, nor could lateral cystotomy have removed the collection of urine. The fact that both catheterism and lateral cystotomy removed the tumour is a strong argument in favour of that tumour having been really caused by the bladder itself.

My own case was that of a woman, twenty-three years of age, who came under my care at the London Hospital for supposed hip disease. Eighteen months previously she had fallen down whilst pregnant, and three weeks after the accident she gave birth to a dead fœtus seven months and a half old. Parturition was favourable, but she was ill directly afterwards, and suffered from a constant pain in the side. Suddenly the pain removed to the right groin, and abscesses formed, leaving discharging sinuses. One day urine was found issuing from these sinuses by my dresser, Mr. Needham. Ultimately, after she had left the hospital, she made a complete recovery, and has since borne children.

Out of the eight cases of reported recovery after intra-peritoneal rupture, abstracts of six will be found in Max Bartels' list—viz., those reported by Walter, Erskine Mason, Thorp, McDougall (2), and Chaldecott, and only one (Walter's) is admitted by that laborious and careful author as a genuine case of recovery after intra-peritoneal rupture. He disposes of four—viz., the cases of Thorp, Erskine Mason, and McDougall—by regarding them either as errors of observation or as cases of subperitoneal or extra-peritoneal rupture mistaken for intra-peritoneal. Chaldecott's case is passed over in silence. Dr. Walter's patient was a man aged twenty-six, who had received a blow on the lower part of the belly. Abdominal section was performed ten hours after the accident. A sponge introduced mopped out nearly a pint of urine and extravasated blood. A rent was observed in the base (?) of the bladder, two inches long. This rent was left to itself. That the foregoing is a genuine case of recovery can scarcely be questioned, unless it is possible for an observer to mistake serous fluid and blood for urine and blood, and by an optical illusion to fancy that he sees a rent where none exists. Mr. Heath demonstrated the rupture in his case by passing a catheter into the bladder and through the rent, and it would have been as well if some precaution of the kind had been adopted by Dr. Walter, so as to leave no room for scepticism. Dr. Henley Thorp's case has been elevated into a fictitious importance by the *imprimatur* of Mr. Heath. The patient was a farmer, thirty years of age, who was thrown from his horse whilst intoxicated, and was found lying by the roadside. Dr. Thorp made the diagnosis, before he had introduced the catheter, from the bent posture of the patient, the spasmodic rigidity of the abdominal muscles, and the urgent and unavailing efforts to pass water; and the diagnosis was "placed beyond the possibility of doubt" by the empty state of the bladder and the change in the direction of the catheter and postural expedients necessary to obtain urine. No evidence of distension of the bladder at the time of the accident could be obtained, and several prominent symptoms were absent. Dr. Thorp's treatment was what he considered to be washing out the peritoneal cavity by means of a catheter fitted with an indiarubber bag. Tepid water, to the amount of three bagfuls, was injected through the instrument. Three times a bagful of about eight ounces was injected, and each time the same quantity regurgitated, showing pretty conclusively that the fluid had merely entered the circumscribed cavity of the unruptured bladder.

In neither of Dr. McDougall's cases is there any satisfactory evidence of distension of the bladder at the time of the accident, and some of the most characteristic primary symptoms of rupture were conspicuously absent. Few surgeons would have any hesitation in setting aside the first case related. The second case rests mainly on the inability to micturate, the presence of blood in the urine, the small quantity of urine drawn off by the catheter, and the removal after an interval of a few hours of twenty-one ounces of fluid by means of the aspirator. Dr. Max Bartels carefully excludes the case from the category of intra-peritoneal ruptures, but seems willing to admit that it may have been an extra-peritoneal rupture; but even this view is attended with difficulties, to my mind insuperable. I believe that there was some unusual condition interfering with the withdrawal of the urine by the catheter, and that the aspirator entered the bladder itself. Dr. Erskine Mason's case has been freely criticised by Mr. Willett, who had no difficulty in rejecting it as an intra-peritoneal rupture, although he concedes an extra-peritoneal rent, and allows Dr. Mason the credit of having saved the life of the patient by lateral cystotomy. Curiously enough, Mr. Willett did not see that the absence of evidence of a distended bladder, and of direct injury to the hypogastric region, as well as the other details of the case, militate equally against an extra-peritoneal rent behind the prostate; and, as I read the case, Dr. Mason himself proved by digital examination that there was no effusion of urine between the rectum and prostate or anteriorly to the latter organ, and inasmuch as a collection of urine in a cavity behind the prostate and on the left side would not have been reached by a lateral lithotomy performed like Dr. Erskine Mason's operation *secundum artem*, by a limited incision, and inasmuch as bloody urine escaped in quantity when the apex of the prostate was only notched, before the finger even was introduced, it follows that the fluctuating tumour felt behind the prostate was the bladder itself, and that the catheter had never fairly reached the urine collected in the viscus.

Mr. Morris's case reads to me like one of severe contusion of the abdomen of the pelvic fasciæ and peritoneum, and of the bladder itself. The evidence of distension of the bladder is defective, as the man had passed water about an hour before the injury. According to the patient himself, he passed by his own efforts three-quarters of a pint of urine in the first thirty-six hours, and very likely the quantity was greater. On admission to the hospital the catheter removed three or four ounces of clear urine, and failed to detect any rent in the bladder, although moved about for the purpose. Plenty of urine was drawn off daily through an elastic catheter fixed in the bladder.

In Mr. Chaldecott's celebrated case it is a most unfortunate circumstance that no evidence is adduced to prove the fulness of the bladder at the time the patient ran against a post, beyond the mere fact that the patient himself felt a strong desire to make water, and hastily crossed the road for the purpose. To describe the bladder as full or distended on this evidence is a *petitio principii*. We are asked to believe that urine was poured into the peritoneal cavity, and was rapidly absorbed, taking in a few days the form of gout; that peritonitis at the same time was set up, and began to subside in twenty-two hours after the accident, on the administration of two scruples of sedative solution of opium. It is true that Mr. Aston Key saw the patient, and thought that the bladder was ruptured; but Mr. Aston Key did nothing to demonstrate the rent by passing the catheter into the peritoneal cavity, through the rent in the bladder. Is it not far more probable that the case was really one of suppression of urine complicated with the effects of the accident, due to latent gout, and passing off under warmth and opium, than that the bladder was ruptured, and that urine poured into the peritoneal cavity was rapidly absorbed and converted into gout? I cannot see that the difficulties of the case are diminished in the least by regarding it as one of subperitoneal, or extra-peritoneal rupture, and the theory of suppression has not yet been disposed of satisfactorily.[20]

(To be concluded.)

CASE OF CYSTIC BRONCHOCELE.

IMPENDING ASPHYXIA; ASPIRATION; RELIEF; EARLY RE-ENLARGEMENT; ATTEMPT AT RADICAL CURE; TRAUMATIC FEVER; DEATH.

BY HERBERT A. SMITH, M.R.C.S., L.R.C.P. ED.

IN common with many localities in which goitre is especially endemic, North Wiltshire might be included in the list of districts where the disease is very prevalent. The chalky character of the soil and the glaring white appearance of the hilly "cuttings" are particularly noteworthy to the stranger; the permeation of watercourses through these, and their impregnation with lime salts, are therefore but natural phenomena. Malarial diseases proper are, however, rare, and thus goitre, deprived of a malarial element, is

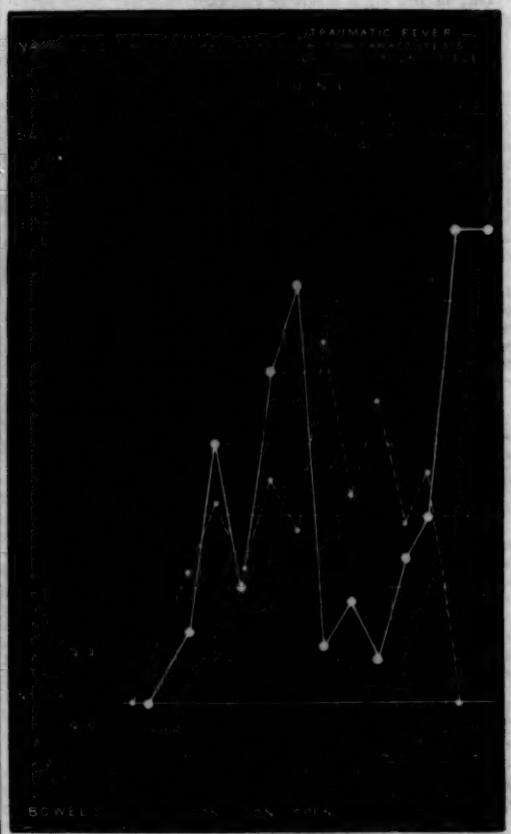
[20] Dr. Eben. Watson advanced the view of suppression in the Edinburgh Monthly Journal, Oct. 1848 and 1849, p. 561. A controversy took place between him and Dr. Gillespie in the Edinburgh Medical Journal, March, 1859, p. 811, and the Glasgow Medical Journal, 1859. Dr. Gillespie combated Dr. Watson's arguments with some success, but the theory of suppression was by no means disproved.

generally an innocent and slow-growing formation. Two views might be advanced respecting the pathology of the cystic variety: (1) that the lining membrane of the vesicles of the thyroid gland proper, already enlarged by the same agency, has a special affinity for the lime salts, and, appropriating them, undergoes progressive development, and so general coalescence; or (2) that the elaborate vascular supply of the gland finds in these vesicles a harbour of refuge for the superfluous salts of the blood, which effect their hypertrophy. We find that water-drinkers—e.g., women and teetotallers—mostly suffer from the disease, and that change of locality and habits of life are alone fruitful in staying its further development. The stationary character of the disease already developed, without the local exciting cause, certainly supports this view. Conversely, I find that rickets is an almost unknown disease in this locality.

S. C——, aged fifty-five, a well-developed, temperate, somewhat stout woman, of anæmic appearance, who has generally had good health, the mother of sixteen children, was born and has always lived at her present home (Mere). She states that she first noticed a fulness in her neck after the birth of her last child (sixteen years ago), and that gradually enlarging the right became larger than the left side, and that proportionate development of each lobe continued until recently. Semi-spherical in shape, the left lobe partakes of a prominent globular form in front. Each is smooth, elastic, tense, and fluctuating, the gland as a whole being non-adherent above and below. The transverse measurement of both lobes is 11½ in., the vertical measurement of the right lobe being 5½ in., that of the left 5¼ in. The lateral boundary of the right is one inch beyond the outer edge of the sterno-mastoid muscle, that of the left half an inch beyond the outline of the fellow muscle, the inner boundary of the same lobe slightly encroaches on the right side, obscuring above the pomum Adami (prominence) the gland extends inferiorly half an inch below the sternal notch; the outline of the right lobe is regular, the surface of each mottled with prominent veins and dilated capillaries; no tenderness or redness; there has been an absence of reflex symptoms, save when she has had "a cold." Deglutition has been hitherto painless (ordinary diet), utterance thick, dyspnœa urgent only in the recumbent position, when compression of the two lobes greatly lessens her breathing power; exertion, excitement, and lying down have, since her last bronchial attack, however, caused urgent dyspnœa, dysphagia, and a noisy stridor is manifest in her respiration and speech; the expression, moreover, is anxious and pallid. Compression of the gland below is slight, the lower portion being supra-sternal. She has sought advice from many medical men, chemists, and, lastly, homœopaths, who equally rung the changes between paints, unguents, and specifics, externally and internally, but all of no avail in the appreciable reduction of the tumour. A few days after consulting me she had symptoms of impending asphyxia, from a bronchial catarrh superadded to a compressed trachea; dyspnœa was extreme, respiration feeble and rapid, face livid and extremely anxious. There was every indication for surgical relief. Finding the growth cystic and fluctuation distinct, I decided on aspiration on the left side, using the largest trocar. This done, a dark coffee-coloured partly flocculent, partly ropy-looking fluid mixed with a brickdust sediment came with a rush into the bottle, in all seven ounces and a half, when, relief being obtained, the trocar (already blocked) was withdrawn, as the patient showed signs of syncope, and the further evacuation of the cyst (which the trocar freely explored) was left for a second sitting. On examining the fluid it was found highly albuminous (one-third), inodourless and alkaline, sediment in colour, consistence, and character like liquid tomato sauce, holding in suspension white shining lenticular pseudo-crystals of varying size; these were probably the broken down débris of the concretions (arranged in strata) of the lining membrane.

May 14th: Wound of puncture healed. Passed a good night, sleeping five hours; some tenderness. Tumour rapidly gaining its original size. The bandage (to support intra-cystic vessels) to be loosened. Ordered a stimulant draught every four hours. Deglutition followed by movement of the left lobe upwards and to the left; the same lobe bulges half an inch beyond the middle line; general condition good; little local discomfort.—19th: Pain during speech and deglutition in the right side, mostly over the large vessels. Nerve irritation over the upper border of left lobe (intra-cystic distension); "feels dazed often, and has visions of foreign bodies, with dragging of the cords of the eye." Aconite liniment was applied.—20th: One week after date the measurements were—transverse measurement of gland, 10½ in.; vertical measurement of right lobe, 6½ in.; vertical measurement of left lobe, 6½ in.—24th: Some pain, and stridor, which is noisy; speech thick. There is now bilateral fluctuation. General health good.—27th: Having suspected more fluid remaining at last aspiration, and tumour having refilled, I decided, with full wish of patient, to repeat the process, and during this sitting removed fourteen ounces of fluid, thinner and brighter (sediment one-fourth), reducing the neck to nearly its normal dimensions. Although the patient bore this well, and support to the neck was given, the following day the measurements were: Transverse measurement of gland, 9 in.; vertical measurement of each lobe, 4½ in.; circumference of neck, 20 in. No subsequent bad symptoms supervened, but refilling of cyst is manifest again.

June 17th: Urgency again marked from re-enlargement of gland, noisy stridor, dyspnœa, lividity, and anxiety of



The dotted line records the temperature without salicylate treatment. The thick line shows the body-heat during the employment of that treatment.

countenance. Measurements: Transverse, 9½ in.; vertical of right lobe, 6½ in.; vertical of left lobe, 6½. At the patient's wish that something "more lasting" might be done, with the idea, as suggested by Dr. M. Mackenzie (Clin. Soc. Trans., vol. ii., page 15) of destroying the secreting power of the lining membrane and promoting suppuration, I offered and performed paracentesis, subsequently injecting the cavity (through the cannula) with a solution of iron tincture (two drachms to the ounce); of this, one drachm was retained after evacuation, which gave thirteen ounces and a half of dark, bloody serum. Prior to injection it was found necessary to free the cannula as it became blocked. The probe exploring fully eight inches of the monocyst transversely, it gave no pain. Antiseptics were not used, but

all instruments after cleansing thoroughly were steeped the previous night in a carbolic solution (one in forty). After injection the cannula was retained *in situ*, and plugged with carbolised tow, and a support to the collapsed tumour given by strapping (broad strips) placed transversely half-way across the neck.—18th: Temperature 99·4°; respiration 24; pulse 84. She is languid, feverish, and complains of constriction of the strapping; on being loosened, instant relief followed, although anterior bulging of the tumour (now tender) shows that inflammatory swelling has set in. Support by means of a soft handkerchief and a stimulating draught ordered, also a compound senna draught. The same evening a rigor, followed by sweating, occurred. Temperature 102°; respiration 36; pulse 120; effusion, pain, and swelling increasing.—19th: Temperature 103°; respiration 36; pulse 120. To have compound citrate of potash draught, and diffusible stimulants.—20th: Temperature 104°; respiration 44; pulse 132. Early rigor (6 30 A.M.); pulse small; tongue foul; face flushed; skin hot, pungent; conscious. Ordered fifteen grains of salicylic acid every two hours; removal of cannula, substitution of a rubber drainage-tube, and a poultice to bring on early suppuration. Evening temperature 99·2°; respiration 24; pulse 116; free sweating (clammy); respiration tranquil; face still flushed; escape of fetid fluid from the drainage-tube; neck suppurating.—21st: Rigor (6 45 A.M.); temperature 99·8°; respiration 24; pulse 120; bowels open twice. To continue the salicylic draught every four hours, and to take champagne.—Evening temperature 99°; respiration 20; pulse 104. Escape of half a teacupful of fetid serum and relief; face still flushed; clammy sweat. To anticipate rigor to take a full dose of salicylic draught in the morning.—22nd: Temperature 100·4°; respiration 30; pulse 104, full, regular. Complains of noises in the head (draught) and cramps in the leg; conscious; no rigor. Evening temperature 101°; respiration 30; pulse 112. Semi-conscious; discharge from neck, though less; tongue foul; has gastro-umbilical pain (solar plexus). To have an enema.—23rd: Temperature 105°; respiration 32; pulse 132. Sighing, high-pitched respiration; muttering, restless delirium since early morning; alæ nasi working; pallor of face; extremities cold, left leg especially, but dorsalis pedis found pulsating; pupils contracted, insensible. Some rhonchus on the right side; tumour tense, much enlarged, pungently hot, and dusky; orifice of wound choked with coagulum; right lobe refilled and fluctuating; left lobe tense, tender, and fluctuating in upper, dull and solid in the lower, meridian. Treatment: Removal of clots; renewal of fomentation; to continue salicylic draught and champagne; hot bottles to the feet. 4 P.M.: Continuation of delirium. Death from coma. Shortly after death the cyst ruptured, discharging per ora half a pint of fetid pus; tumour extending from chin to sternum; gangrenous. No post-mortem allowed.

Remarks.—The coma was induced by the compression of the large cervical vessels, the previously high temperature being unattended with unconsciousness. A rigor thirty-one hours after the operation foretold the onset of the traumatic state; the departure of the temperature, of which a chart is annexed, from the normal is explained by the salicylate treatment, which brought it down five degrees on the third day; the morning rise on the fifth was recorded after a rigor; of these three were marked, and a fourth (unnoticed) preceded the rise to 105° in my opinion. The mechanism of effusion in this case was interesting. Twenty-four hours after the operation by either method the tumour had enlarged to within 1½ in. of the transverse and 1 in. of the vertical measurement, giving roughly an average of half an ounce secreted per hour, not allowing for that absorbed; after this, compression of effused contents allowed but little if any further secretion. The early enlargement of the cyst is due evidently to the power of effusion the lining membrane possesses, its stationary character to the process of absorption in the absence of a serous membrane being at zero. Had the one kept pace with the other, putrefaction would not have occurred; there would have been a limit to the tension. The question now arises, Did the cause of the high inflammatory action set up rest in the introduction from without of invisible germs that rendered the fluid infective? It is admitted that the exudation of serum is not infective as alike are organisms without; could then a chemical change in the exudation products leading to genuine suppuration take place as readily with antiseptics as without? Could it occur at all without the presence of micro-organisms Occurring in an isolated country cottage, a model of cleanliness, it would seem that there was not sufficient chance of the air containing septic matter even in a diffused form to prove effective in blood serum to make it necessary to raise the question at all. Again, if as an irritant the injection of iron, as in rodents (Wegner), is always infective, and the exudation products are thereby septic, and if the aim of our treatment, suppuration, is invariably attended with the presence of septic organisms, it seems to me that antiseptics are not indicated; if, on the other hand, the inflammatory changes that accompany the use of antiseptics are of limited extent and duration (Sanderson), our course is obvious. Yet my treatment is counselled by a great authority. The presence of septic organisms generated from without in common with the bacilli of tubercle (Baumgarten) must first be proved by some well-known and simple test before the danger signal is upheld against our surgical resources divested of an antiseptic element; if, on the other hand, we are to be guided by Professor Hueter, we must invariably use antiseptics in our practice, taking our sprays suspended to our pack-saddles, even into remote country districts, in carrying out the theory that "organisms exist everywhere, ready, whenever access is offered to them, to enter the body and to fulfil their morbific function."

Ealing.

SUCCESSFUL EXTIRPATION OF THE LARYNX.

BY WALTER WHITEHEAD, F.R.C.S.E., F.R.S.EDIN.,
SURGEON TO THE MANCHESTER ROYAL INFIRMARY.

LARYNGEAL SURGERY has of late attracted considerable attention, and as the profession is somewhat divided in opinion on the respective merits of extra- and intra-laryngeal operations in dealing with laryngeal growths, I wish to place on record the particulars of a case favourable to the former procedure.

W. G——, aged forty-six, blacksmith, was admitted into the Manchester Royal Infirmary on April 28th, 1882, on the recommendation of a medical friend, who suggested the desirability of removing a growth which he had discovered attached to the right vocal cord. The patient had suffered from extreme hoarseness, difficulty in breathing, distressing cough, and occasional paroxysms of dyspnœa, for three months before coming under observation. Laryngoscopic examination afforded a conjectural diagnosis that the growth, which overspread the right vocal cord, was of an epitheliomatous nature. The disease could only be inferred to extend beyond the range of vision by the knowledge that malignant neoplasms in that locality usually extend below the cords. Tracheotomy was performed as a preliminary measure on April 30th, the operation giving immediate, but only temporary, relief to the more pressing symptoms. A recurrence of ominous dyspnœa, which was afterwards discovered to have been produced by the imperfect manner in which the cannula had been reintroduced after having been removed for cleaning, hastened the decision to remove the disease.

On May 27th the thyroid cartilage was slit from below upwards, and the two halves held apart, when it was seen that the new formation not only implicated the vocal cord, but extended, as was conjectured, downwards, and involved the upper part of the trachea. Before proceeding to excise the diseased structures, Trendelenburg's tampon was substituted for the tracheotomy cannula, and the insufficient protective influence of the tampon against blood finding its way down the air-passages was guarded against by packing the trachea above with a small sponge. The whole of the disease, the thyroid and cricoid cartilages, and the two upper rings of the trachea, were then removed by means of scissors. The epiglottis was left intact. The skin was brought together by a few silk sutures, and the wound dressed with dry lint.

On the following day Trendelenburg's tampon was replaced by a soft rubber tube which still remains *in situ*. A microscopic examination of the growth confirmed the diagnosis as to its being an epithelioma. The patient's voice was not immediately lost; for several weeks after the operation he could express himself in monotone and could be distinctly heard at a distance of six feet; gradually the sound faded and eventually disappeared altogether. It can still be demonstrated, by means of a flame in front of the mouth,

that air finds a channel in the track of the original air passages. The patient now breathes quite freely, takes his food without inconvenience, and enjoys life as fairly as can be expected under the circumstances. The absence of any local glandular enlargement or evidence of any recurrence of the disease affords a reasonable prospect that the patient may derive prolonged benefit from the operation. The idea of introducing the artificial vocal apparatus of either Gussenbauer or Foulis was entertained, but abandoned on the grounds that no real advantage had yet been established in favour of these instruments. The preference for thyrotomy was based on the opportunity it affords for a complete inspection of the entire larynx, and the facility it gives for extending or restricting the extent of the operation to any limit necessitated by the amount of the disease. The only difficulty met with during the operation was the separation of the deeper attachments.

Manchester.

CASE OF PARASITIC AFFECTION OF THE MOUSTACHE.

BY GEORGE THIN, M.D.

THE following interesting case which occurred in my practice is worthy of record for several reasons.

In April, 1876, a gentleman, aged about thirty, consulted me on account of loss of hair in one part of the moustache, a little to the right of the nose. He had recently returned from residence abroad, but was in good health, and very careful of his person. His strong black and handsome moustache was disfigured by a bald strip about a quarter of an inch broad, which passed from its upper to its lower border. The hairs on both sides of the bald strip were split at the ends, and were bent and withered-looking. On examining these altered hairs under the microscope, they were found to contain spores similar in size and appearance to those of trichophyton tonsurans. The disease of the hairs had

Hair from moustache affected with fungus growth (conidia), macerated in solution of potash, and mounted in glycerine. The dark part shows the portion of the hair in which the spores were present. Magnified five diameters.

existed, he told me, for five months. I directed him to brush his moustache twice daily with the following preparation:—Carbolic acid, one drachm; olive oil, two ounces and a half; lavender oil, six drops. In less than a month the disease had disappeared, and the bald part became again covered with healthy hairs. But the singular part of the history is to come. The disease was first observed in November, 1875. It reappeared in November, 1876, and every succeeding November until 1880 inclusive. Last November, for the first time since it commenced, it did not reappear. During the successive outbreaks the nature of the disease was verified by microscopic observation. In the attacks subsequent to the first the carbolic oil was used four times stronger than I originally prescribed it, and always with the speedy cessation of the loss of hair. The skin from which the hairs fell off remained healthy in appearance, showing no redness or scaling, or any signs characteristic of tinea circinata or tonsurans or of parasitic sycosis.

The two points that have led me to consider the case as remarkable are, first, the position of the fungus in the hair; and, secondly, the reappearance of the disease in November for five successive years. In regard to the position of the fungus, the direction of the growth is different from that which I have observed in tinea tonsurans. In that disease the fungus grows into the hair-follicle between the hair-shaft and the internal root sheath, enters the shaft near the papilla, and grows outwards in the centre of the shaft. In this case the fungus attacked the free extremity of the hair, and grew downwards towards the skin. This is shown in the accompanying woodcut, which represents a drawing of an affected hair slightly magnified. In the woodcut the dark end is the free extremity of the hair, and represents the portion of the shaft affected with the fungus. The tapering extremity of the dark band in the centre of the hair accurately represents the manner in which the growth is found penetrating the shaft. Why this disease should have recurred each successive November can only be guessed. We must, I imagine, assume that some spores remained from each year to the following year, and that in November they found the conditions of growth. The parts of the hairs in which they grew were completely removed from the fluids of the body. Did they find in November the conditions of temperature and moisture suitable to their growth? The patient during these years enjoyed good health, lived in London, and led an active professional life.

Queen Anne-street, W.

A NEW INTRA-UTERINE STEM, COMBINED WITH AN INSTRUMENT FOR KEEPING SEPARATE THE LIPS OF THE CERVIX AFTER INCISION.

BY J. BERESFORD RYLEY, M.D.

IT will, I think, be admitted without question that dysmenorrhœa and its wide-spreading effects solicit the attention of the profession more frequently than all the other diseases of the uterus put together. Any new mechanism therefore that has for its object the further alleviation of a malady so distressing, on account of its physical, physiological, and psychological consequences, will, I feel sure, be received with that consideration which its importance deserves. The idea of making the cervix uteri the *point d'appui* or fulcrum for an intra-uterine stem,

instead of the vagina or a point outside the body as has hitherto been the case, had been present to my mind in an indefinite shape for a long time, and is only the extension of another which had for its object a contrivance for keeping separate the lips of the cervix after incision. Those who have been called upon to perform this operation and all who have written on the subject are aware and assert that a successful issue depends altogether upon the tedious after-treatment and is but little affected by the mode of operating. Dr. Atthill of Dublin, than whom no one has written more practically upon this point, says in his "Diseases of Women," "Passing the uterine sound daily for at least two or three weeks subsequent to the operation and at intervals for some time longer, I find to be usually sufficient to prevent the divided surfaces from uniting." If one will but pause for a moment to consider the almost unbearable distress to the patient and the humiliating tedium to the practitioner involved in such a proceeding, it will not be wondered at that so many should have pronounced this operation to be most unsatisfactory. I have examined the cervix uteri after operation by most of the well-known gynæcologists in London and elsewhere, and have usually found that after a time its canal and outlet had contracted back to their originally abnormal conditions, and that the history of the majority of the patients was that they had had more or less relief for a few months after operation, but that the pre-existing symptoms had returned as severely as ever. Again, those who have had any experience in the application of the various forms of uterine pessaries must very often have

felt extremely disappointed with their general results, and will, I think, agree with me that not one-tenth of the patients for whom they are used obtain any marked benefit therefrom. Intra-uterine pessaries undoubtedly give much better results, but their mechanism hitherto has been so complicated and imperfect as to render their introduction and retention both difficult and distressing. I hope, however, that the instruments that I now submit to the profession will be found to obviate all the difficulties and distresses that I have enumerated. Their mode of application is so easy and the principle on which they are based so simple, that a glance at the diagram will be sufficient to indicate this without any tedious details on my part. It may be objected that an intra-uterine stem as applied in this manner will not alter any abnormal axis of the uterus; but I do not think that this is a matter of any great consequence, because the chief objects, I think, to attain by this mode of treatment are to straighten the organ in question and keep its canal pervious. It also may be thought that the metal pins on which the instruments are based might set up irritation at the points of puncture and easily tear through the structures, but I can answer from experience that neither of these objections will be found to be realised in practice, and that they can be worn for months without inconvenience. I hope that those who, like myself, make a special study of the diseases of women will give these instruments, which are made for me by Messrs. Krohne and Sesemann of Duke-street, Manchester-square, a fair trial, and kindly acquaint me with the results of their experience.

Finsbury-square, E.C.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. IV. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

RUPTURE OF LIVER; THROMBOSIS OF HEPATIC VEINS; EMBOLISM OF A BRANCH OF LEFT PULMONARY ARTERY; PLEURISY; DEATH; NECROPSY; REMARKS.

(Under the care of Mr. G. H. MAKINS.)

THE following case came under Mr. Makins' care while doing duty for Mr. W. Johnson Smith.

On Sept. 30th, at 3.30 P.M., J. R——, aged twenty-four, a labourer, while in a state of intoxication, was run over in the street by an empty cart, and taken at once to the hospital. The wheel, it was said, had passed over the abdomen.

On admission he was in a state of collapse, and could not be got to answer any question; the countenance and lips were extremely pallid, the pupils dilated, the extremities very cold, and the pulse almost imperceptible. He was put to bed, hot bottles were applied, and a hypodermic injection of brandy (twenty minims) was given. At 8 P.M. he was much improved in appearance, answered questions rationally, but in an excited manner; smelled strongly of spirits; lay on right side. He complained of great pain and tenderness in the epigastrium, but was able to turn in bed without much suffering; no abnormal abdominal dulness; had been sick twice since admission; respiration 30; abdominal wall moving freely; no sign of fractured ribs; temperature 97°; extremities still very cold; pulse 130, small, but quite perceptible. Hypodermic injection of one-third of a grain of morphia. The bowels were moved some time after admission. The patient had a quiet night, but slept little, and next morning he complained of much pain in the epigastrium. The abdomen was slightly swollen and tympanitic; no abnormal dulness in flanks; temperature 98·4°; skin still pale, and hands felt cold; pulse 150, small; respiration 32, chiefly thoracic, but abdominal wall still moved; tongue furred, but moist; no further vomiting. One teaspoonful of brandy was given every half hour; milk diet; ice; one grain of opium pill was given, to be repeated in half-grain doses every four hours. At 8 P.M. the opium had relieved pain; still pallor; temperature 97°; hands very cold; pulse 150, very small; respiration 44, entirely thoracic and extremely shallow.

On Oct. 2nd he had slept fairly; lay on his back, sometimes with knees raised, sometimes down; slight pain and tenderness chiefly in epigastrium; abdomen as yesterday; respiration 38, thoracic, but much less shallow than last night; temperature 98°; skin moist; pulse 138, stronger and better volume; tongue moist, covered with white fur. Took plenty of milk. On the 3rd he had slept the greater part of the night, but in the morning he complained of pain on the left side of the chest; abdominal wall hard; abdomen slightly tympanitic, but no marked swelling; no tenderness anteriorly, and no abnormal dulness; respiration 30, entirely thoracic; pulse 120, steadier and stronger; temperature 99°; skin moist; tongue furred, moist; no sickness; bowels confined. 8 P.M.: Pain in left side very severe; respiration 40, very jerky and shallow; temperature 101·5°; pulse 140; chest somewhat hyper-resonant anteriorly; breath-sounds exaggerated, and some moist râles; patient not in a condition to be lifted to examine back. On the 4th he complained much of pain in the left side; face looked pinched; no cough nor expectoration; respiration 32, very shallow; pulse 132, stronger than last evening; temperature 101°. The breathing became rapidly more impeded, and the patient died in the afternoon.

Necropsy.—Abdominal cavity contained about a pint of fluid blood, one or two coils of small intestine slightly granular on surface, and the whole somewhat distended by flatus, but no further signs of peritonitis. At the right extremity of posterior border of the liver a laceration existed, a bruised portion of tissue occupying an area about the size of a small orange extending into the substance of right lobe; this was of an ochre-yellow colour, and internal to it were several fissures in the apparently healthy hepatic tissue containing blood-clot; externally it formed one of the boundaries of an incomplete cavity, the walls of which were made up in addition by the anterior fold of the coronary ligament, the diaphragm and the right supra-renal capsule, together with some recently effused lymph. This cavity contained fluid blood and débris, and the walls were deeply bile-stained. The hepatic veins leading from and traversing the bruised area were occupied by firm dark blood-clot, and this condition was found to extend back as far as their entrance into the inferior cava, the lining membrane of the veins being roughened and vascularised. On microscopical examination the yellow area of hepatic substance was found to be in the condition known as "coagulation necrosis," and the walls of the hepatic veins and the tissue surrounding them largely infiltrated with small-celled inflammatory new growth. The other abdominal organs were normal. Lungs: The lower lobes on either side were much collapsed, and at the extreme base completely void of air, sinking in water. In the upper part of the lower lobe on the left side was an infarct, about the size of a small orange, wedge-shaped, with the base abutting on the surface, and in the main branch of the pulmonary artery to lower lobe was an embolus about three-quarters of an inch in length, decolourised, not attached to the arterial wall, and when incised disclosing a central cavity containing softened matter; this embolus apparently having its origin in the thrombosis of the hepatic veins. The left pleural cavity contained a considerable effusion of blood-stained fluid, while recent lymph covered the pleural surface of the infarct, also united the lower part of the fissure and covered the entire base of the lung, which was adherent to the diaphragm. Right pleura, heart, and pericardium were normal.

Remarks by Mr. MAKINS.—The above case is recorded as affording an example of a termination to a rupture of the liver not often described, and of which mention is omitted in most of the text-books, although the arrangement of the veins would seem particularly favourable to its occurrence. The patient had escaped the primary dangers of shock, hæmorrhage, acute septicæmia, or severe peritonitis; and although still liable to the supervention of the two latter, yet, in the absence of the pulmonary complication dependent on the thrombosis and subsequent embolism, he undoubtedly stood a chance of recovery; the more so since reparative processes preparatory to the localisation of the damage had already commenced at the seat of injury.

BRISTOL ROYAL INFIRMARY.

NOTES OF A SEVERE CASE OF STRAMONIUM POISONING; SUBCUTANEOUS INJECTION OF MORPHIA; RECOVERY; REMARKS.

FOR the following interesting notes and remarks we are indebted to Dr. Alfred London, house-surgeon.

On August 10th, 1882, Rosina J——, aged seven, whilst at play with two sisters in a suburb of Bristol discovered some green berries, of which the three partook freely, Rosina, however, eating more than the other children. She returned home shortly after, and was noticed to be strange in her manner. Soon she became slightly, and finally very, delirious. On learning that she had eaten something, her parents gave her an emetic of mustard, and then took her to a surgeon, who administered another of sulphate of zinc, neither of which acted. She was admitted into the Royal Infirmary, under Dr. Shingleton Smith, four hours after the occurrence, and her friends produced some leaves supposed to belong to the plant the berries of which she had eaten, this was recognised to be stramonium (datura stramonium, or thorn apple). Her symptoms were those of acute deliriant poisoning. The child was unable to answer questions, was extremely restless, rolling her head from side to side, and throwing her limbs about, so that she could scarcely be restrained in bed; she was talking incessantly and incoherently, and did not seem to recognise her friends, but evidently had spectral illusions. She was constantly picking the bedclothes and pawing the air. Her pulse was very rapid, her face flushed, and her eyes were frequently squinting, but not in any definite direction; the pupils were widely dilated. Her breathing was rapid, but not laboured; its rate, and that of the pulse, could not, however, be counted, as she was so restless. An emetic powder, containing ipecacuanha and antimony, was administered in water, but failed to act, whereupon one-twenty-fourth of a grain of apomorphia was injected under the skin, which had almost immediately the desired effect. In the vomit at least 100 stramonium seeds were found, together with portions of the seed capsule, mixed with partially digested food. As her symptoms showed no signs of abating, and were very alarming, one-sixth of a grain of acetate of morphia was injected hypodermically after about twenty minutes' interval. This had the effect of quieting her in a few minutes; she soon slept; the pupils became of moderate diameter, though not contracted; the strabismus, however, continuing for four hours. When seen next morning she was much better, having passed a quiet night; there was no delirium, the strabismus had ceased, but the pupils were again widely dilated. The temperature, pulse, and respiration were normal, and also the urine; the skin throughout had been dry, in spite of her exertions, but no rash was seen, and the child did not complain of dryness of the throat. On the 11th she was sick twice after taking purgative medicine, more seeds being brought up, and when purged later on in the day, the stools also were found to contain seeds. On the 12th she was sick again, and seeds were still found. Subsequently nothing worthy of note occurred, and the patient was discharged on the 18th.

When shown a thorn apple the child recognised it, and stated that she had eaten the contents of ten. Her two sisters were also ill and rather light-headed during the night, but they recovered without any special treatment beyond emetics administered by their mother.

Remarks by Dr. LENDON.—The recorded cases of poisoning by stramonium are very rare, and I am unable to look up the particulars of two instances reported in 1837 and 1872, which are mentioned in Dr. Neale's "Digest." All that seems to be known is that while the symptoms closely resemble those of poisoning by belladonna and hyoscyamus, they commence sooner, are more severe, and terminate fatally in a shorter time. The only symptom which appears not to have been noticed usually in poisoning by these drugs is strabismus; on the other hand, no erythematous rash was seen, and no dryness of the throat or thirst was complained of. With regard to the quantity of the poison taken, the child's statement probably cannot be relied upon, nor have we any means of ascertaining whether it was even a fatal dose, but that the quantity was very considerable must be assumed from the alarming severity of the symptoms; moreover, as the seeds were not altered in appearance, and presumably had not been acted upon much by the gastric juice, it is probable that only a small amount of the active principle which was actually present in the stomach had been absorbed into the system. The chief points of interest in the case, however, are the decided antagonism manifested by morphia to stramonium, both as regards the delirium and the condition of the pupil, and the speedy and complete relief afforded by this moderate dose of morphia. It may be objected that as the other children recovered without any special treatment, so, too, this child might have recovered; on the other hand, it must be remembered that they were not considered bad enough by their parents to be brought up for advice. It is also worthy of note that seeds were vomited as long as forty hours after the poisoning, the patient having been sick on three previous occasions, so that implicit reliance could not be placed on emetics only. I am unable to ascertain whether morphia has been previously used as an antidote either in human beings or in experiments upon animals. In the fourth edition of Guy and Ferrier's "Forensic Medicine" it merely says that the use of morphia is worthy of trial.

WEST BROMWICH DISTRICT HOSPITAL.

CASE OF EARLY PERFORATION IN TYPHOID; REMARKS.

(Under the care of Mr. LANGLEY BROWNE.)

FOR the following notes we are indebted to Mr. F. F. German, resident medical officer:—

T. G——, aged eighteen years, presented himself in the out-patient department on the morning of September 27th. He had journeyed between two and three miles, having walked a considerable portion of it. He was suffering intense pain, which he referred to the region of the abdomen, the walls of which were flaccid; his face was vacant of expression, pulse weak; he walked with difficulty, and had been ill ten days. The bowels had been moved daily, but the evacuations were "frothy, sometimes streaked with blood." He was admitted to the wards and four minims of the officinal solution of morphia were injected hypodermically. This gave him great relief. Examination revealed nothing further; there was no increase of temperature, no other history than above obtainable, and the diagnosis was consequently a matter of some doubt. In the evening the pain referred to the whole surface of the abdomen again became very severe, and marked tympanites ensued. Between two and three ounces of clear high-coloured urine, containing one-eight albumen, were drawn off. The patient expressed relief, and subsequently conversed freely. About 9 P.M. he was observed to put a finger of each hand in his mouth, as though to widely extend it, and was writhing in great pain. This modified, but he rapidly sank, and died at 10.30 P.M. the same night.

Necropsy, the following afternoon.—In the thorax were extensive pleuritic adhesions on the left side, and the cavities of the heart were nearly empty. On opening into the abdomen a large quantity of chylous fluid escaped; the peritoneum was sticky and slightly adherent, and the small intestines were distended to nearly size of large. The ileum was much congested, and on its inner surface were several small typical ulcers, one of which, about three and a half feet from ileo-cæcal valve, perforated the bowel and was still patent. The other organs were healthy.

Remarks.—Perforation has been estimated to occur in from 1 to 2 per cent. of the entire number of sufferers from typhoid, and of the fatal cases has been variously stated to have occurred in from 8 to 12 per cent. As to the time of occurrence and situation of this accident, there are but few reliable statistics. In those tabulated by Hoffmann, 9 per cent. only occurred at the end of the second week, while 27 per cent. happened between the eighteenth and twenty-first days, a similar number at the end of the fifth week, and the remainder subsequently. In 77 per cent. of these same cases, the perforation occurred at a spot not exceeding twenty inches above the ileo cæcal valve, and in about 11 per cent. only at the same distance as in this case. I would add, that twelve days previously the boy had been at work, and during his illness, though at times in considerable pain, was not confined to bed. Was it the typhoideus ambulans of some authors?

BEDFORD GENERAL INFIRMARY.

A FISH-HOOK IN THE ŒSOPHAGUS; EXTRACTION; RECOVERY.

(Under the care of Dr. GOLDSMITH.)

FOR the following notes we are indebted to Mr. E. A. Laurent, M.B., resident surgeon.

F. P——, aged ten, of Great Brickhill, Beds, whilst engaged in fishing held in his mouth a fish-hook attached to a piece of gut, and accidentally swallowed it. He was admitted to the infirmary eleven hours after the accident, under the care of Dr. Goldsmith, senior surgeon to the institution.

The only subjective symptom on admission was pain over the episternal notch. Half an inch of gut was seen protruding from his mouth, and on following the gut backwards with the finger, the notion conveyed to the touch was that the hook lay somewhere in the windpipe, but the boy had no cough, no dyspnœa, and his voice was perfectly clear. On applying gentle traction to the extremity of the gut, great resistance was felt. This was consequently discontinued and chloroform administered. A piece of silk ligature was tied to the end of the gut, and to the extremity of the silk a fine wire was attached. A traveller fourteen inches long was then passed along the twisted chain of iron wire, silk, and, lastly, gut down the œsophagus. It, however, proved to be too short to reach the hook; it was therefore withdrawn and a full-sized œsophageal bougie substituted for it. This passed with perfect ease until it reached the bend of the hook; here slight resistance was felt, which was easily overcome by pressure. During this part of the operation the bougie touched the cardiac end of the stomach and vomiting was induced, although the insensibility was nearly complete. The bougie was kept in position and the wire tightened; both bougie and hook fixed at its extremity were carefully withdrawn without any further trouble. The hook proved to be a No. 6 perch, and the gut was nine inches and a half long.

Reviews and Notices of Books.

The Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D., F.R.C.P. Edin. Pp. 300. Edinburgh: Maclachlan and Stewart. 1882.

THIS work consists of four chapters. In Chapter I. the author introduces us to the "anatomy and physiology of the spinal segment." "The spinal cord," Dr. Bramwell writes, "may be said to consist of a series of segments placed one above another. Each segment comprises the portion of cord to which a pair of spinal nerves is attached, and each segment may be viewed as a distinct spinal unit, or, to speak somewhat figuratively, as a distinct spinal cord for a definite area of the body—viz., that portion of muscle (muscular area) to which its anterior roots proceed, and that portion of skin, tendon, muscle, mucous membrane, viscus, &c. (sensitive area), to which the fibres of its posterior nerve-root are distributed." The mode in which the author thus introduces us to the anatomy, and proceeds in the same way to the physiology and pathology of the spinal cord through the medium of a single segment of it, is philosophical, and tends much to clearness of explanation. Once let us obtain a good idea of the structure and relations of a single segment, and but little more than an act of multiplication is requisite to fill the mind with true notions regarding the cord as a whole. The spinal cord lends itself remarkably well to this mode of examination and description, which would be far less easy, if not impossible, in the case of the brain. The various intra-medullary and extra-medullary lesions having been considered from an anatomical and physiological point of view, Dr. Bramwell enters very fully and with much lucidity of description upon the important subject of case-taking. The method of examination which he advocates is clear and to the point. We quite agree with his remark that "a methodical plan of case-taking is essential for scientific purposes, and it would be most advantageous if physicians could agree upon a uniform system." Under the "clinical examination of the spinal cord" a concise account is given of the various symptoms which are met with, and their significance; the distribution and the amount of paralysis; practical directions as to the mode of applying electricity in the diagnosis; remarks upon the mechanical irritability and tonicity of the muscles; the condition of the reflex movements, including a very clear account of the vesical reflex and the disturbances to which the action of the bladder is liable; the rectal and sexual reflexes. The sensory functions of the spinal segment are next considered, and the various disturbances of these described. A couple of pages are well devoted to the subject of "pain referred to the spinal column," a point which we believe is constantly giving rise to mistakes. The question of the diagnosis in diseases of the spinal cord receives, as it deserves, full attention, and many valuable hints are contained in the portion of the work relating to this subject. Some good remarks also occur in reference to prognosis, a subject upon which, unfortunately, in the nature of things, there is not very much to be said of a satisfactory character. The same remark may perhaps be applied to the question of treatment. What little there is to be said upon this matter is sensibly put, and exaggerated estimates of the power of therapeutics in chronic disease of the nervous substance are properly avoided.

The fourth chapter contains a tabular classification of the diseases of the spinal cord arranged after the plan, though differing very considerably in its details from that, introduced by Grasset of Montpelier. We notice here a reference to what the author calls "indiscriminate lesions" of the anterior cornu. The following remarks on this subject appear to us very pertinent: "The anterior cornu may, like any other part of the transverse section, be affected by indiscriminate lesions. Other parts of the transverse section are usually involved; the symptoms are then compound, being partly due to the lesion of the anterior cornu, partly to the lesion of the other parts which happen to be affected." From want of remembrance of these facts cases of disseminated sclerosis are very frequently misunderstood. For instance, a patch of sclerosis involving the anterior cornu at a certain level will give rise to muscular atrophy in the district to which the motor roots arising in that particular segment are distributed. The observer, perhaps, makes a diagnosis of progressive muscular atrophy, and this because he fails to notice that there is anæsthesia at some other part of the body, arising from a patch of sclerosis involving the sensory side of the cord at another point. The tabular classification is followed by a short description of the individual organic affections, differential diagnosis being especially dwelt upon.

Dr. Bramwell's book is profusely illustrated. Believing that one great secret of all successful teaching is to instruct by the eye as well as by the ear, the author is in the habit of copiously illustrating his lectures by diagrams, drawings, and microscopical illustrations. The diagrams and drawings which are here introduced into the text by means of woodcuts, and the microscopical sections which are represented in colours, are excellent specimens of art. The sections of the cord are very true to nature, and we are especially pleased with the sketch diagrams, which are very numerous and effective. These are of great help in the elucidation of a subject which is often of so difficult a kind as to need all the aid which can be given by graphic illustration. The sketch diagrams and the concise tables of differential diagnosis constitute a special and acceptable feature of this book. No doubt the work is not exhaustive as a treatise upon diseases of the spinal cord—indeed, for this would not many volumes be required?—but by a sort of rough analogy we may liken it to an excellent guide-book amply furnished with

charts and tables of ready reference, and sketch maps of the routes by the aid of which the traveller, be he ever so little acquainted with the country, will find his journey immensely facilitated, and will readily learn in what directions he may best concentrate his attention and powers of observation.

Report of the Scientific Results of the Voyage of H.M.S. Challenger (Captains Nares and Thomson) during the years 1873–76. Prepared under the superintendence of the late Sir C. WYVILLE THOMSON, and now of JOHN MURRAY. Narrative, vol. ii. Pp. 744, and 29 with one plate. Longmans, 1882.

THIS, the second volume of the general narrative of the voyage of the *Challenger*, has been first published because it had been nearly completed by Sir C. Wyville Thomson before his lamented death, the present editor, Dr. Murray, thinking it was better not to postpone the publication of the scientific results it contains. The subjects treated of in the present volume are—1. A memorandum on the magnetical observations made during the voyage by Sir Frederic Evans. 2. Magnetical instructions. 3. Abstract of magnetical observations during the voyage. 4. Abstract of magnetical observations made at land stations, prefaced with descriptive references to the positions (observation spots) of the instruments. 5. Abstract of variations of the compass observed at sea. 6. Abstract of observations with Fox circles. 7. Memorandum on the meteorological observations made during the voyage by Staff-Commander Tizard, R.N. 8. Abstract of meteorological observations. There are also two appendices —one by Professor Tait on the pressure errors of the *Challenger* thermometers, and a second by Professor Renard on the petrology of St. Paul's Rocks.

In view of the exceptionally good opportunities afforded by the voyage for taking magnetical observations, the ship was elaborately fitted with instruments rendered practically free from error at Kew, and the influence of the ironwork of the ship on which was carefully estimated before starting. At each land station touched at, the absolute declination, inclination, and horizontal intensity of the magnetic force were determined, and at sea observations of the three elements were taken daily. About 74 of the former and upwards of 600 of the latter observations were taken. The magnetical instruments supplied to the ship were a portable unifilar magnetometer for determining the absolute horizontal intensity and the declination on land; a Barrow's circle with two reversible needles for determining the inclination on land; a Kater's azimuth compass, with levelling table, for determining the declination on land; Fox's apparatus or circle, for observing the magnetic inclination and force at sea primarily; a gimballed table complete, adapted for Fox's circle, as to be used at sea; a compass bowl and standard cup, and a small vibrating needle for determining independently the ship's mean horizontal force to the north.

No less than 724 pages of this volume are occupied with the records of the observations made with these instruments, and are a wonderful example of continuous and careful work. They will prove of immense value to all who are interested in the great problems of magnetism.

Professor Tait's memoir on the pressure errors of the *Challenger* observations is very interesting, and, as he remarks, his inquiries have led to many curious offshoots: as, for example, the determination of the amount of heat developed in different substances by exposure to very high pressure under different circumstances; the cause of the breaking of a piece of glass or other fragile body under hydrostatic pressure; the accurate measurement of pressures greater than can readily be compared with the weight of a tall column of mercury. Amagat has, it appears, successfully worked with a column of mercury 1000 feet high, corresponding to a pressure of about three tons weight per square inch; but Professor Tait describes an apparatus which is capable of giving results of considerable accuracy up to pressures of twelve tons weight per square inch.

Professor Tait points out various defects in the instruments and corrections employed in the determination of the temperature at great depths. He calculates that the internal capacity of a glass tube with thick walls and small bore is reduced by about 1-1000th part for each ton weight per square inch of pressure applied from without, the ends being closed; and his calculation was verified by experiment, a result that considerably modifies the corrections for pressure that were made on board the *Challenger*.

The report on the petrology of the barren rocks of St. Paul in the Atlantic, by the Rev. A. Renard, is interesting. Darwin gives an account of them in his "Voyage of a Naturalist," and in his geological observations describes them as rocks which rise very perpendicularly from the sea. The *Challenger* observations show that they have a vast plain on their eastern side, the depth of water on which varies from 2500 fathoms to 1425 fathoms. Darwin comments on the peculiar structure of these rocks, and is indisposed to regard them as volcanic. The Rev. A. Renard, however, arrives at the conclusion that the rocks, though presenting many peculiarities, are really of igneous origin.

Therapeutical Remembrancer. Presenting in detail all Medicaments accredited by the British Pharmacopœia; with copious Supplementary Tables, offering or recalling suggestions of resource from the "Materia Medica," interspace being provided for private notanda, &c. By J. MAYNE, M.D., L.R.C.S.E., L.S.A. Second edition, revised. London: J. & A. Churchill. 1882.

THE information contained in this work is of a most peculiar description, and we much fear that any student who adopted the "suggestions" of the author would find himself in trouble. Under the head of "Alteratives and Deobstruents," we find bromine recommended for internal administration in *eighty-grain doses*, and we are told that it is to be given in solution. This is very startling, and we were in hope that the author had temporarily confounded bromine with bromide of potassium or bromide of ammonium; but this is not the case, for the dose of these salts is correctly given on the same page. The author's views on therapeutics are certainly original; at all events, they are not shared by the majority of the profession. We have judged his book by a not very high standard, and have found it wanting. Even in the most elementary work on therapeutics we should expect to find some reference to the use of quinine in ague, and of sulphur in the treatment of scabies; but on these subjects the author is strangely silent. The therapeutic action of sulphate of quinine is summed up in the statement that it is used "in an infinity of cases where restorative energy is urgently necessitated." We are told that it may be given "in solution," but we are not told what solvent should be employed. Surely it would be better for a student to know that sulphur is used to cure the itch than that "it was an esteemed medicine among the Greeks, Arabs, and Hindoos." Nux vomica, we find, is used in "gout, rheumatism, dyspeptic complaints as a nervine stimulant." Strychnia, too, is used in gout, although the author advises the "utmost consideration in its employment." Belladonna rubbed over the eyebrow or lid "expands the pupil;" whilst atropia is an active poison "intended only for external use." These are a few examples taken quite at random. We are sorry to have to speak thus of the book, but it is quite unreliable.

THE Sevenoaks Local Board has applied to the Local Government Board for permission to borrow £8000 to be expended on sewerage works.

DR. RICHARDSON'S REPORT
ON THE
SANITARY CONDITION
OF THE
BOROUGH OF BRIGHTON.

To the Mayor and Corporation of Brighton.

Royal York Hotel, Brighton, Sept. 1882.

MR. MAYOR AND GENTLEMEN,—In compliance with the request conveyed to me by his Worship the Mayor, on July the 4th, I proceeded immediately to make a complete and independent Sanitary Inspection of the town of Brighton.

I have been enabled to make this inspection the more searching and complete from the circumstance that this is the second time in which I have had occasion to carry out the same duty. In the year 1864, at the request of my late friend, your distinguished townsman, Sir J. Cordy Burrows, I included Brighton in the list of towns upon which I was then reporting for my series of reports on the "Medical History of England," and in that year, 1864, I published at length the "Medical History of Brighton" in the *Medical Times and Gazette* for June 11th, 18th, and 25th.

This previous labour, while it familiarised me with the localities I have recently inspected on your instruction, has enabled me to make some very important comparisons bearing on the condition of Brighton as it was eighteen years ago and as it is at this present time.

The comparisons will appear, incidentally, as I proceed with this report, but I may state at once, generally, that in a sanitary point of view, the improvements which have been carried out in Brighton during the period which has elapsed since my last inspection, have been of the most satisfactory character. The authorities have evidently been incessant in their efforts to better the sanitation, and in the greater part of their efforts they have been signally successful. In cases where they have failed to carry out all that they have wished, the failure has arisen from no want of care or desire on their part, but from the fact that they have been working at a time when the details of sanitary science—details new to the world at large—have been undergoing development by what may be called the experimental attempt at success, a process of training which carries with it the necessity of getting at practical truth by the steady exclusion of practical error.

I, who during the whole period named have been daily engaged in sanitary work and progress, may venture, as safely as anyone living, to state that such experience in such work and progress was inevitable. I foresaw it, in 1864, as applied to Brighton, respecting which I then wrote:

"The sanitary condition of Brighton, like that of most other large towns of the present day, is progressive, each step having to be determined by experiment before its adoption."

Coming back now to observe what has been done, I am surprised to find how much has been successfully done. At that time the water-supply was very good, but it has been so perfected that no town in the world can boast a freer, a more distinct, or a purer supply. In that day I found eleven miles of streets supplied with sewers, now sixty miles of streets are supplied. In that day cesspools abounded everywhere, now they are quite exceptional, and, where they exist, have no connexion with the water-supply. Thus in some of the most important of sanitary details there have been great and effective advances.

In proceeding with the present inquiry as to the health of Brighton at this time and in the recent past, I have devoted several weeks of research on the spot, taking nothing at second-hand, but making every inquiry personally. This report, therefore, may be accepted as based on direct observation.

In carrying out this research it occurred to me that the most complete course would be to ascertain the following facts:—

1. What is the state of health in Brighton at the present time, including the schools (public and private), institutions, and hotels?
2. What has been the state of health in the recent past?
3. What is the present condition of the water-supply of the town?
4. What is the condition of the drainage and sewerage?
5. What is the state of the paving and roadways of the town?
6. What is the condition of the slaughter-houses, cow-sheds, and bakeries?
7. What is the condition of the common lodging-houses of the town?
8. What are the facts bearing on the rate of mortality of Brighton, and what causes have influenced and continue to influence that rate?
9. What improvements in sanitation are suggested by the research?

HEALTH OF BRIGHTON AT THE PRESENT TIME.

As bearing upon the first subject of these inquiries—namely, the present health of Brighton,—I proceeded to make a direct investigation of the conditions of health that were manifested in the schools and other public institutions. I put myself into communication with the heads of schools, with the medical officers of the different medical institutions, with the superintendents of the charitable and other institutions, with the parochial medical officers, and with medical men who, by their relation to particular questions which were brought out by my investigations, were most able to afford me the necessary information.

The schools naturally called earliest for attention. They are the grand tests of sanitation in every place. If the sanitary condition of a place be fundamentally bad, the fact will, of a certainty, be declared in the young who are present in the schools.

I made known therefore a request, through the mayor, on the day of my arrival, that I should like, at once, to visit the leading educational establishments, and in a few hours I had so many requests for inspection that several days were demanded for the school inspection alone, and after all I fear that some schools to which I was invited were from pressure of time omitted.

In a letter addressed to the mayor, at his request, I stated what the result of this inspection had been up to the date of July 13th. I reported that I had found a condition of good health that was most remarkable; that the educational institutions of Brighton exhibited a freedom from contagious and indeed from all disease that was quite exceptional in my experience; and that the attention paid to sanitary details and supervision by the heads of the scholastic establishments I had visited was admirable and deserving of the warmest commendation.

The further and much extended investigation on this subject which I have been enabled to carry out since July 13th, fully confirms the statement given.

Of the private schools to which I had admission, I visited no less than forty of the largest, arranging my visits so as to include every district of the town in which such schools are situated. In the course of these inquiries I had the opportunity of ascertaining the sanitary condition of schools in which over eighteen hundred scholars—the young of both sexes being about equally divided in them—are undergoing education. Throughout the whole of the investigation I met with but one instance of disease of any kind. In one school, singularly healthy in every respect and provided with excellent sanitary details, a pupil who had been out of town on a visit had contracted chicken-pox, in a mild form. Beyond this, I could trace out no case of epidemic disease nor of any other kind. I need not comment on this evidence, because it speaks for itself. I doubt whether in the present state of sanitary science it would be possible to find anywhere a more striking proof of healthy life. I should further remark that the scholars in every instance bore the appearance of excellent health.

From the private schools I passed to the inspection of the Board Schools, and the larger of the Voluntary Schools. The Board Schools, ten in number, all of which were visited, hold a total school population at the present time of seven thousand four hundred (if all on the roll be included) with an average daily attendance of six thousand. In my visits I

had the opportunity of seeing the children in all the departments, boys, girls, and infants.

In the Circus-street Board School I found 100 girls in attendance, and 119 infants, with no sickness in anyone belonging to the school. The children of this school are very poor, their parents being, as a rule, of the poorest working class; they were consequently not so well clothed and fed as in some of the other establishments of the same kind, but they were, in point of healthy appearance, of fair average when compared with the same classes of school children in other towns. The school arrangements are good. The waterclosets,—constructed on Macfarlane's system, in which a large body of water in the receiving part of the closet is regularly carried off twice daily,—are exceedingly clean and free from odour; the school-rooms are clean and well ventilated, and the arrangements altogether satisfactory.

The Finsbury-road School, the newest of the Board Schools in the town, was found with an attendance of 230 boys, 292 girls, and 364 infants. There had been a recent outbreak of measles in the homes of some of the children attending at this school, but it had subsided. I visited the children in their playgrounds, and it would be difficult to find anywhere a body of children of the same class who presented a better or healthier appearance. The arrangements of the school are excellent in every particular.

The same observations apply to the Middle-street School, in which I found 260 boys, 210 girls, and 180 infants in attendance; to the Pelham-street School, in which were 250 boys, 200 girls, and 300 infants; to the Lewes-road School, in which there were 198 boys, 150 girls, and 247 infants; and to the Preston-road School, in which there were present 267 boys, 150 girls, and 190 infants. The exercises of the children in musical drill at the Preston-road Schools were of the most striking character, and indicative of distinctively good conditions of physical health.

The Hanover-terrace Board School, presenting an attendance of 270 boys, 126 girls, and 173 infants; the Puget Schools, presenting an attendance of 200 boys, and 160 girls; the Richmond-street and Sussex-street Schools, in which there were 267 boys, 200 girls, and 250 infants; the St. John's School, in which there were 272 boys, 212 girls, and 214 infants, were all schools in which, as in the Circus-street School, the children were of a poorer class. These schools were, nevertheless, at the time of my visit, free from disease, and the sanitary condition was good. With the exception of one room in the St. John's School, in which the ventilation seemed less perfect than in the other rooms, and in which, in reply to the question, I was told that both masters and scholars sometimes suffered from headache, I have no fault to find; indeed, I was struck by the skill with which some of the changes in old buildings, which really ought to come down, have been carried out.

The Central National School, a voluntary Church school, under the direction of the Rev. J. J. Hannah, in which there were 276 boys, 140 girls, and 90 infants, was in an exceedingly healthy condition. The rooms are spacious, light, and well-ventilated, and the appearance of the scholars is quite satisfactory. The same observation applies to St. Margaret's School, in which there were 80 boys and 100 girls, and to St. Martin's, in which there were 154 boys, 200 girls, and 130 infants.

At the St. Mary and Mary Magdalene Sunday Schools in Bread-street I found everything plain but perfectly clean and healthy. In the scholars attending them there was no disease, and I ascertained that amongst them there had been no fatal case for four years past, and then only one, the cause of death being pulmonary consumption.

Passing from the schools to other public institutions in which the young are located and educated, I inspected the following and add the results:—

In St. Mary's Hall, Kemp-town, 100 clergymen's daughters are received and educated. At my visit to this admirably conducted institution the scholars were away for their vacation, but I learned that since the year 1874 they had been free from any outbreak of contagious disease. In the spring of the present year some of them had suffered from headache, with lassitude and failure of appetite, without fever, eruption, or any symptom of acute febrile disease. The illness was for some days pretty general, and some of the scholars were slow in resuming their natural aptitude for study, although none of them were at any time in danger. The house is situated on a fine elevation, and the utmost care has been taken to make the sanitary condition perfect. The exit drains from the house have been separated from the dwelling, the soil pipes are ventilated, and the water from the baths and offices is discharged into the open air before entering the drains. The rooms, dormitories, and lavatories are excellently fitted, and there is a commodious and isolated ward for the sick.

In the Blind School, in which thirty-one children (sixteen girls and fifteen boys) are brought up, I found that there was entire freedom from disease, and that for two years and a half past there had been uninterrupted good health. At the time of my visit the children were away for their holiday, and I had not the advantage of seeing them personally; but all the arrangements of the school were excellent.

In the Deaf and Dumb Institution the pupils were having their annual holiday at the time of my visit; but I learned that for the past forty years there had not been a single instance of an outbreak of epidemic disease commencing within the school itself. It has occasionally happened that contagious disease has been directly introduced into the school. Measles has entered, and scarlet fever was recently introduced in this way. Under these circumstances the sick have been immediately isolated and removed from the house, by which the further spread of the disease has been prevented.

Taking them as a whole, the educational establishments of Brighton afford unmistakable evidence of a present state of good health that could not be surpassed. My inspection included observations in institutions in which certainly not fewer than ten to eleven thousand of the population, or a tenth of the whole resident population, receive daily educational training, and in that whole I did not find one case of serious disease. Further, of those who were absent from illnesses of all kinds, I was only able to trace nine altogether, or less than one in the thousand.

From the schools and educational establishments I carried my inquiries to those establishments in which persons of both sexes are provided for during convalescence or disease, or while being trained to some industrial or useful art. These institutions are excellent tests of the health of the place in which they are situated. The persons who are resident in them are often feeble from want of comforts and ease in early life. Some are sick. All, in a certain degree, are more than ordinarily liable to disease.

In St. John's House, a convalescent home for children, I found twenty-eight little boys and girls, nearly equally divided, in various stages of recovery from lingering illnesses. These children are sent to Brighton from different parts of the kingdom for the sake of the change, the treatment, and the sea air. They were all sickly children, as is implied by the nature of their residence here, but the greater number were improving in health, and were enjoying, with much relish, their seaside walks. There was no case of contagious disease, and there had been none for a period of three years. Three years ago a case of scarlet fever was imported from London, but under immediate isolation the spreading of the disease was prevented.

In the Home for Invalid Children (70, Montpelier-road), I found twenty-one children, all of whom were subjects of some form of chronic constitutional disease. There were representatives of both sexes in the institution and all were entirely free from infection. There had not been an outbreak of infectious disease in the place since its foundation, twenty-five years ago.

In the Home for Orphan Boys (46 and 48, Buckingham-place), I found forty boys who were housed and taught. There was no disease, and, except that a case of gastric derangement assumed symptoms of modified typhoid, twelve months ago, there has not been a case of zymotic affection in the institution. The house is beautifully clean, every bedroom is specially ventilated, the waterclosets, offices, and baths are in excellent order, and the drains are entirely cut off from the house. There is a special sick-room, away from the dormitories, which is set apart to receive at once any child that is taken unwell. This admirable plan is common, I may observe, in all the educational establishments where scholars are in residence.

In St. Mary's Hospital, Queen-square, I found what may be called a religious house, something like the houses that were maintained by the religieuses of the Middle Ages for the feeble in mind, body, and estate. It is, I was given to understand, one of the Rev. A. D. Wagner's High Church Charitable Institutions. It consists of one side of a street of houses, ascending from a low to a high level, the houses being made to communicate with each other. Considering

that this hospital has, so to say, been improvised, it is remarkably well and skilfully arranged. Every part of it was thrown open, unreservedly, for my inspection. I found the hospital containing 230 inmates. Fifty of these were fatherless, motherless, or poor children; fifty were aged women; fifty were women who had been rescued from unfortunate lives; fifty were persons in training for domestic or other service, or for needlework or some useful occupation; and the remainder were attendants, superintendents, or training scholars not included in the classes named above. I found the most admirable order everywhere prevailing in this establishment, and the greatest care taken in respect to the sanitary details. The living rooms and bedrooms, though small, were free from unnecessary furniture, neatly and tastefully furnished, and exquisitely pure and clean. The lavatories, closets, and offices were well arranged, and the laundry, which is on a large scale, was fitted with every contrivance for securing effective and wholesome cleanliness. It is, in fact, a public laundry on a very good principle, and if it were provided with a separate apartment in which clothing, coming from houses in which there is infectious disease, was subjected to a disinfecting degree of heat before it went to the laundry proper, the place would be a model public laundry. As it is I wonder that it is not in demand beyond any requirement it could at this moment fulfil.

The inmates of St. Mary's Hospital were entirely free from disease at my visit, and had been free in an exemplary manner for long past. They had never suffered from any outbreak of an infectious character, and they bore the appearance, generally, of persons in as good health as they could be under the conditions in which their lives had been cast, the young especially.

The lady superior keeps a careful registry of what befalls the inmates under her care, and at my request she was kind enough to take it down and let me calculate the deaths that had occurred during the past ten years—namely, from July 19th, 1872, to July 4th, 1882. The deaths were at the rate of four a year, ten of which, at ages ranging from sixty-three to eighty-seven, including three octogenarians, sank from the paralysis of senile decay, finding in fact in the hospital a refuge for their declining days. The hospital presents, through these facts, a striking illustration of healthiness. Its inmates come from those who are worst provided for. It is not at all favoured by position; it is close to the large disused burial-ground of the old church, and being constructed out of a number of small houses it has had no special advantages of an architectural kind. It, nevertheless, has represented a low general mortality, and an infant mortality, in children under five, of seven deaths in ten years. It has been visited by no epidemic whatever.

The Percy Almshouses, which receive twelve inmates, all women, and chiefly those of advanced life, are most healthy and in good condition, clean, neat, and wholesome. They were entirely free from any contagious disease, and had been for a period as long as I could trace back—namely, twelve years.

The Home for Training Neglected Girls in Warleigh-road I found containing twenty-two inmates, young girls who are learning the duties belonging to domestic service and other useful occupations. The house was exquisitely clean and comfortable. It is well and scientifically drained, and it has good sleeping accommodation. There has never been any epidemic in it, and the girls under training, who were introduced to me, were in excellent health.

St. Andrew's Home, in Egremont-place, is a residence provided for eight youths who have no home of their own. The house is small, but very clean. It is an ordinary house, and for the purpose which it serves the most that could be made of the accommodation has been made. In my opinion there is barely sufficient space, and I find that a better and more convenient house will soon be secured. There has been no disease of an epidemic character, nor any other of a serious character in the house. The inmates were all very healthy and seemed to be, truly, in a place where they enjoyed the privileges of home.

The Needlewomen's Home, in the Dyke-road, receives nine inmates, all of whom are suffering from some bodily deformity, and most of whom are, necessarily, very feeble. The house is a model of cleanliness and comfort, and the sanitary arrangements are good throughout. There has been no case of infectious disease for many years, at least, and probably none from the commencement of the institution. An unusually good condition of health prevailed at the time of my visit.

Albion Hill Home, called commonly Mrs. Vicar's Home—after the name of the generous and noble-hearted lady who has been from the first its mainstay—receives young girls who are reclaimed from degradation and poverty. It consists of a home, in which there are sixty-two dormitories, a sewing room, and a large public laundry, with other rooms attached; a probationers' cottage, containing nine dormitories and rooms, in which the needlework and laundry work of the establishment are done; of the Princess Alice Memorial Cottage, where public needle and machine work are carried out, and in which there are fifteen dormitories; of the London Cottage, for inmates from London, containing fourteen dormitories and rooms, in which hopeless and helpless girls can be taken in at a moment's notice, and cared for until they can be received into a home permanently; and of the servants' home, in which the man servant of the home and his wife reside, and the upper part of which is occupied by young servants, who, being out of place, are seeking for new situations. The objects of this most useful and beneficent institution are carried out admirably, and if the occasion were befitting I should speak of it as I feel for the object's sake. As it is, I can only report that I found at my visit universal good health, that I could trace no instance in it at any time of epidemic disease, and that the sanitary arrangements and details are of the most praiseworthy character.

The summary of the evidence derived from the inspection of the above benevolent institutions confirms the evidence afforded by the schools. The inspection revealed an unusually healthy condition, an unusual freedom from spreading and infectious disease, and a sanitary supervision everywhere which is on a level in all instances with, and in many instances superior to, that which is common in other English towns. No mind, free from bias, could draw from these institutions any other deduction than that they betoken the possession of every advantage for general health and marked freedom from exceptional outbreaks of disease.

From the public institutions above noticed my attention was next directed to the medical institutions where the actual sick receive treatment for their diseases. In these institutions we find always sound information respecting the health of the localities in which they are situated, while their museums, though they contain only the dead evidences, speak the nature of the prevailing diseases. I made, therefore, special inquiries relatively to the evidence that could be gathered from these sources of information.

The Sussex County Hospital, situated at Kemp-town, contains thirteen wards for medical and surgical cases, and a male and female fever ward. In my report on the hospital in 1864 I expressed an opinion that the mortality of this institution was rather in excess of some other provincial hospitals that had at that time been renowned for their low mortality, and I particularly cited that of Norwich in comparison. In the ten years previous to 1864 the number of patients admitted into the Sussex County Hospital had been 1165 annually, and the annual death-rate had been seventy-five. This yielded a death-rate of 6 per cent., or 2 per cent. above what had been represented at Norwich. Afterwards the position of the two hospitals changed in favour of Brighton, and the Brighton hospital fairly holds its own in comparison with other similar provincial institutions. In the report of 1864 I dealt on the comparative freedom of the hospital from cases of epidemic and contagious disease, and I still find that it enjoys a similar freedom. At the time of my present visit there were no causes whatever that added to the ordinary sickness or mortality in any department; on the contrary, the number of cases of serious disease were unusually small, and there was almost entire freedom from diseases of the zymotic or contagious class. Mr. Scott, the resident surgeon, who was good enough to look up for me the number of zymotic cases, reported to me that since the beginning of the present year there had been, from January 1st to July 15th (twenty-eight weeks), 23 cases of scarlet fever, 3 of measles, 10 of typhoid, and 1 of erysipelas. Compared with the average number of cases occurring in periods of time of the same length during the preceding five years, these returns show the rate of zymotic disease in the present year to July 15th to have been in the proportion of 37 to an average of 36·2 in the preceding periods. The very rare occurrence of typhus fever, diphtheria, erysipelas, and pyæmia or surgical fever are the best indications that the hospital is well provided with pure air. The record before me for the past six years shows only 1 case of surgical fever, 1 of typhus, 5 of diphtheria, and 13 of erysipelas, the

last-named being in every instance examples of erysipelas of the face, a form of disease to which many persons are specially predisposed.

The mortality of the cases of zymotic disease in the hospital is a further study which deserves attention. In the five years and twenty-eight weeks—viz., from January, 1877, to July 15th, 1882,—the cases of zymotic disease which are on the record before me, include typhus, 1; pyæmia or surgical fever, 1; scarlet fever, 230; measles, 33; typhoid, 87; erysipelas, 13; rötheln, 4; diphtheria, 5. Total, 374. The number of fatal cases of this total was 30, yielding a rate of 8 per cent. An analysis of these general results is also deserving of study. The one case of typhus died. The one case of pyæmia died. Of the 230 cases of scarlet fever, 218 recovered; 12, or 5·2 per cent., died. Of the 33 cases of measles, 31 recovered; and 2, or 6 per cent., died. Of the 87 cases of typhoid, 73 recovered; and 14, or 16 per cent., died. Of the 13 cases of erysipelas, all recovered. Of the 4 cases of rötheln, all recovered. And of the 5 cases of diphtheria, all recovered. I need not point out to sanitarians that such results as these could not possibly have been obtained, under the pressure of such dangerous and fatal diseases, in other than an air pure and exceptionally favourable to life.

The Royal Alexandra Hospital for Sick Children was the next of the medical institutions to which my inspection extended. This is a newly built hospital, on a site admirably selected. The house stands so high that it is visible from almost all parts of the districts surrounding the town and from the sea along the whole line facing the town. The building has been fitted up with every consideration for health, and may be accepted for the present time as a model institution. The ventilation, the warming, the arrangement of the waterclosets and offices, and the modes of cleansing leave nothing to be practically desired, while the walls of the wards, lined with artificial marble, can be cleaned like porcelain. I found no case of infectious disease in the institution on the occasion of my visit, and the record of cases during the twelve months in which the hospital has been opened showed that two forms of epidemic disease alone had occurred in it. There had been eight cases of measles, attended by one death, and two cases of mumps, both of which had recovered.

The Lying-in Charity of Brighton, situated in West-street, was included in my inspection, because the condition of health of those who go through the great "pain and peril" is always an index of the good or bad sanitary state of the place in which the process of childbearing takes place. It is now well-known that childbed women, even amongst the classes of women most cared for, are singularly susceptible to diseases of a serious type, such as scarlet fever, erysipelas, puerperal fever, milk fever, and peritonitis. Here, then, is an institution well worth careful study, a test institution of salubrity or insalubrity. The institution affords gratuitous attendance and assistance to poor married women in their own homes, advice and assistance to women suffering from uterine diseases, and to infants suffering from any form of disease. It also admits within its walls a limited number, not exceeding five, of poor women during their confinement. The greater part of the special attendance on the women is by midwives, who, in emergency, summon the assistance of one of the members of the medical staff.

At the time of my report upon this institution in 1864 I found that, since its establishment by the late Dr. Lyons, in 1830, the number of 13,300 women had been atttended during delivery, a rate of 391 per year. The number in 1863 was 740, and the numbers that have been attended since the foundation amount to about 27,000. They reach now about 900 annually, the patients residing in the poorest parts of the town and being all too poor to obtain their own paid attendant. In the institution itself I found good wards and all necessary conditions for health. For many years past there had been no contagious form of disease. On inquiry into results of attendances outside the hospital I ascertained that they also had been remarkably good. In 1882, as in 1864, I could find no evidence of the occurrence of an outbreak of any kind of contagious disease amongst the patients who had been confined at their own homes since the opening of the institution. Mr. Goode, the resident surgeon, reports to me that, during the past two years with which he has been connected with the institution, he has not had a single case of scarlatina, small-pox, or erysipelas, and only one of peritonitis amongst the patients attended at their own homes.

The Dispensary, in Queen's-road, was another medical institution to which I directed my researches. The dispensary does not receive patients within its walls as in-patients, but it issues annually letters for treatment in its out-patient and visiting department, to the number of from eight to nine thousand, to persons in the various districts—northern, central, southern, and eastern—of the town. The returns of the dispensary afford therefore a most important index of the health of, and of the diseases prevailing amongst, the poorer classes. The difficulty in utilising the information thus rendered is considerable, owing to the circumstance that one patient may have his or her letter renewed several times during one illness, as letters have to be renewed every month, but I am indebted to the resident surgeon, C. B. Richardson, M.B., for an able statement, in which this difficulty is, as far as possible, avoided.

At my visit in July the number of persons under treatment at the dispensary was very small, and the presence of infectious disease was reduced to a low figure. I found, however, that during the early part of this and the closing part of last year there had been a considerable increase in the cases of certain of the epidemic diseases, so that in the present year the number of letters issued had more than doubled. The fact, for reasons which will be explained in another part of this report, led to an inquiry further back, when it transpired, from an analysis of the cases treated in the past five years, that the increase of sickness was due to four epidemic diseases—scarlet fever, measles, whooping-cough, and typhoid. In preceding years the number of these diseases had been exceedingly low. From July, 1878, to June, 1879, there were only 55 cases of scarlet fever, 168 of measles, 174 of whooping-cough, and 35 of typhoid; total, 432 cases. From July, 1879, to June, 1880, there was an increase in the number of all these diseases except typhoid, which had fallen to 7, the total being 655. From July, 1880, to June, 1881, there was a decrease in the numbers, the total being 460. But in the latter part of 1881 there was an outbreak of them all of a very extended character, which culminated in the first six months of 1882, so that in this last-named period there were 305 cases of scarlet fever, 574 of measles, 370 of whooping-cough, and 86 of typhoid, yielding a total of 1335. Fifty-five of the typhoid cases were in the northern district, in which the disease was distributed.

Of the other epidemic diseases treated in the dispensary the numbers have been moderate, and very small in respect to some of great moment. For three years, 1877-80, small-pox was absent altogether. In 1880-81 there were 9 cases; in 1882, up to the end of June, 1 case, average, 2 per year. Of diphtheria and croup, the numbers from 1877 to 1882 averaged 6·6 per year; of erysipelas, 27; of pyæmia, 1; of typhus, 0·2, or one case only in the five years. Considering that the practice of the dispensary represents practice amongst the poorest of the poor; that it is carried on in the homes of the poor, in which there is no accommodation for separation of the sick, even when the disease is of the most contagious type; that medical skill is scarcely sustained at all by competent nursing; and that proper food and the proper means of cooking what food there is in an efficient and cleanly manner can rarely, if ever, be supplied, I do not consider that the dispensary represents anything peculiar in regard to the kind of disease to which it administers relief, or to the number of cases of epidemic disease. I shall deal with this subject in another section, but, speaking in this section of the present health of Brighton, the evidence taken at the dispensary shows, generally, a healthy condition of the town in all the poorer districts.

The Sanatorium, which has recently been erected at Bear-hill, comprises two houses for the reception of patients who are suffering from contagious diseases, and is constructed on excellent principles. One of the houses is smaller and older than the other. The newest building, which I carefully inspected, is fitted to take in fifty patients on each side. The wards are spacious, giving from two to three thousand cubic feet of space to each bed. The ventilation is free, and the principle of warming promises well. The position of the Sanatorium, on an elevation which exposes it to the air from the open country as well as from the sea, is well chosen in respect to purity of air, the only difficulty connected with it being the transit of the sick from the town to it. This is met by an ambulance, which is fitted with all modern contrivances. There are in the institution good facilities for the disinfection and cleansing of clothing and bedding, and owing to its surroundings the place cannot be approached, within a

considerable distance, by houses or other buildings. The new Sanatorium is constructed of iron on its outside, lined inside with wood inner felted, and, very wisely, is so framed that it could be taken down altogether and rebuilt at any time at a small expense. It would be perfect in construction if the inner walls were lined with flat galvanised iron, so as to admit of being regularly cleaned by a fire brush. I anticipate that the Sanatorium will greatly relieve Brighton of infection amongst its poor. There were no cases of disease in the new Sanatorium at the time of my visit, the building being incomplete. The older and adjacent building, which contains two wards, each capable of holding twenty beds, is built of wood; there were sixteen cases of infectious disease, chiefly of scarlet fever, in its wards on the day I was there.

The summary of results from the inspection of the medical institutions of Brighton, like that derived from the schools and public charities, is to the effect that the health of Brighton is at this time exceptionally good.

In 1864 I found in Brighton a workhouse situated on Church-hill, in the western portion of the town. The house had been erected in 1820. I was not sparing of it. I described it as "crowded, squalid, dark, worse than a prison," and my advice then tendered was "down with it! For the sake of Brighton as an advanced town, down with it at once. That is the only remedy." The remedy has been applied, and now on the summit of Elm-grove stands a really model workhouse, with its infirmaries and all other necessary accessories. I inspected the workhouse throughout, and have no observation to make upon it, except that its sanitary condition is up to the standard of modern requirements in all respects. There was not a case of infectious disease of any kind within it, and the inmates, old and young, bore as healthy an appearance as ever obtains in a workhouse population. There had been, I learned, a few cases of measles in the infirmary, before last Easter, but since the erection of the building the occurrence of epidemic affections of every kind has been altogether exceptional.

The Parochial Industrial Schools, situated across the Downs, about three miles from Brighton, and containing the children from the workhouse, were also inspected. I found these schools in the best sanitary condition, and, indeed, I remember nowhere to have seen anything of the kind so good in every detail. The children bear evidence of rude health, and the boys, who have a splendid band amongst themselves, excel in musical art. There was not a case of sickness either amongst the boys or girls, at the time of my visit, nor has there at any time been any prevailing epidemic.

Extending my inquiry in relation to the diseases present in those who are under parochial relief, I received reports from the parochial medical officers of the cases under treatment by them in their respective districts. All the districts were free from any spreading or prevailing epidemic. Mr. Leigh, of the central district or parish of Brighton, was good enough to look up his register of cases for me, and reported that from January 1st, 1881, to June 30th, 1882, he had had no case of diphtheria, 7 of typhoid—4 doubtful—38 of measles, 18 of scarlatina—4 doubtful—and 13 of small-pox. Amongst his private patients he had had no case of diphtheria or small-pox, and few of typhoid, but a good many of scarlatina.

The summary of the results of inquiries into parochial medical practice entirely confirms the view indicated from the other institutions, that the present health of Brighton is good, and that there is no prevailing disease of an extensive or serious character.

I turned from the inmates of the parochial institutions to the Police Force, in order to ascertain if there were indications of diseases of an epidemic and serious nature amongst its members. The health of the Police Force affords a fair test of the salubrity or insalubrity of the district or locality in which it is placed. The men constituting the Force are on duty in their respective stations, whether the stations be exposed to the influence of infection or not. They are in like manner exposed to whatever emanations may be given out in the streets, alleys, and houses they guard. They are exposed to these dangers by night as well as by day, and they are, at the same time, exposed to all the vicissitudes of season. In Brighton the Force, numbering from 115 to 130 men, are, most of any persons, exposed, therefore, to such local dangers as may be present. At my visit I found from Mr. Rogers, the surgeon to the police, that he had not an instance of epidemic disease on his list, and that he had never had such during the period of years in which he had held office. I failed also to obtain evidence that there ever had been such an occurrence since the establisment of the present Force, twenty-eight years ago.

The results of the inquiry and inspection as to the health of the Police Force confirm, in the most signal manner, the previous results.

In the course of making the inspections particularly named in the above passages, I lost no opportunity that offered of prosecuting general inquiries into the health of the inmates of hotels, boarding-houses, lodging-houses, and private houses, and, as will appear in a future page, I made a special inspection of the common lodging-houses. I consulted also many of my medical brethren in large practice in the town as to its present state of healthiness. I met, throughout, with but one statement—namely, that there was no special prevailing disease, and that the amount of disease altogether was so small there was, according to the medical expression, "nothing doing."

In this inquiry, nevertheless, I heard of some instances of serious contagious disease which ought to be noticed. I was informed of a case of diphtheria, but, on looking into it, I discovered that the sufferer had been brought to Brighton, with the disease, in the hope that the sea air would give the only chance of cure. I was informed of two cases of scarlet fever, both of which had been sent to Brighton, with the affection to pass through it there. I was informed of another case where a patient who was recovering from scarlet fever, had came to Brighton, as soon as he could be removed, for the sake of quick recovery. These examples were interruptions to the general statement of the freedom from contagious maladies; but they did not affect the town on the question of its own salubrity. On the whole the investigation yielded the same results as those rendered in the preceding summaries.

As throwing still further light on the subject now in hand, I obtained from Miss Clements, the superintendent, an account of the nurses supplied, under her direction, by the London and Brighton Nurses' Association, situated in Middle-street, King's-road. In the past year and a half this Association has supplied 270 nurses to visitors and families, chiefly to visitors. Of these 15 were employed for infectious cases, measles, scarlet fever, one case of small-pox at Shoreham, one of diphtheria, and one of typhoid. The rest, Miss Clements reports, "were purely medical and surgical cases, mostly invalids sent to Brighton as a last hope."

In reciting the existing conditions of health in the private and public schools; in the large and small charitable institutions for the relief of the sick; in the centres for parochial relief, with the districts through which parochial medical relief is distributed; in the police force; in the common lodging-houses; and in the town generally, I have exhausted all the available, and, as far as I can see, all the possible sources of information. The conclusions I have therefrom arrived at, as to the present state of Brighton, are as follow:—

1. That there is no specially prevailing epidemic or contagious disease in the town or district.

2. That there is nothing whatever to point to any extant local cause as producing such diseases.

3. That the health of the town, considering its size, the special dangers to which it is exposed as the convalescent resort and sanatorium of London, and its position as a refuge from London of vast numbers of unhealthy poor itinerants, who come to minister to the service and amusement of visitors, is unusually good.

HEALTH OF BRIGHTON IN THE RECENT PAST.

The present health of Brighton may be accepted as extremely good, and, so far, my inquiries have borne the most satisfactory fruit. I have now to enter on a new field, and to ask, Has the same condition been maintained in the recent past? It is presumed by some that this has not been the case. I have therefore taken the utmost pains to ascertain the precise facts.

The question before us resolves itself immediately into one relating to the presence or absence of the zymotic or contagious diseases. There is no suspicion that the healthiness of Brighton has in any way failed in regard to its climatic healthiness. It is not assumed for a moment that there has been an increase of bad health from what are known as constitutional or diathetic affections. It is not assumed that those diseases which arise from strictly malarious causes, diseases of the type of ague, which were once so

prevalent in Brighton, have revisited Brighton. On the contrary, it is well understood that ague, which I still found lingering in the place in 1864, has now disappeared altogther, unless it be imported.

But it has been assumed that the zymotic or contagious affections have been on the increase, and that they have taken permanent hold owing to the existence of certain sanitary defects on which they are supposed to thrive. To the investigation into the truth of this allegation I have specially directed my inquiries.

My first efforts in this line of research were made to determine how matters really stood on the official tables of mortality. Putting aside all mere general reports and rumours, I went to the prime source of information, the records of the Registrar-General, and that the facts ma put forward in all their truthfulness I introduce them as they have been supplied from the Registrar-General himself, first to Mr. J. R. Hollond, M.P., for the Mayor, and through him to me.

"General Register Office, Somerset House.

"In the ten years 1871–80 the mortality from what are ordinarily called the seven zymotic diseases was lower in Brighton than in any other one of the twenty towns, of which weekly statistics are published by this office.

"The mean annual rates of mortality per 1000 from those diseases, collectively and singly, were as follows:—

TABLE A.

	1871–80.		1881.	
	20 Towns.	Brighton.	20 Towns.	Brighton.
Small-pox	0·42	0·00	0·32	0·08
Measles	0·51	0·27	0·55	0·19
Scarlet fever	0·80	0·39	0·66	0·70
Diphtheria	0·11	0·08	0·15	0·05
Whooping-cough	0·76	0·45	0·57	0·31
Typhoid fever	0·50	0·24	0·31	0·40
Diarrhœa	1·22	1·00	0·80	0·45
The seven above-mentioned diseases	4·32	2·52	3·36	2·18
All causes	21·8	20·4	21·7	19·0

"In 1881 the zymotic death-rate, as a whole, was also much lower in Brighton than in the twenty towns collectively; but in one of the seven diseases—namely, fever, and in this one alone—the mortality in Brighton was above the general average of the twenty towns (see Table A).

"In 1882 the state of things has been very different. In the first and second quarters of this year the zymotic death-rate has been almost twice as high in Brighton as in the twenty-eight greatest towns, taken collectively, owing to the excessive mortality from measles, scarlet fever, and whooping-cough (see Table B).

TABLE B.

	First Quarter, 1882.		Second Quarter, 1882.	
	28 Towns.	Brighton.	28 Towns.	Brighton.
Small-pox	0·13	0·15	0·10	0·00
Measles	0·85	3·04	0·86	2·01
Scarlet fever	0·56	1·76	0·44	1·10
Diphtheria	0·18	0·07	0·15	0·15
Whooping-cough	1·47	2·89	1·13	1·25
Fever	0·33	0·15	0·29	0·15
Diarrhœa	0·24	0·11	0·34	0·21
The seven above-mentioned diseases	3·76	8·17	3·31	4·87
All causes	24·7	29·2	20·9	21·8

The study of this instructive table affords a complete exposition of all that can be said to the detriment of Brighton, and if the facts I have put forward in respect to the prevalence of disease in the public and medical institutions of Brighton be re-read by the side of this table, they will be found to tally with it, the total of the result being, that at the close of last year, and in the first two quarters of this year, the town was visited by epidemics of four diseases of fatal character, from which, for many years past, it was comparatively exempt when placed in comparison with the average mortalities of twenty towns containing, like itself, a large population. On referring to the table A, it will be seen that for ten years Brighton stood as 0·27 instead of 0·51 in relation to measles; as 0·39 instead of 0·80, less than half, in relation to scarlet fever; as 0·45 instead of 0·76 in relation to whooping-cough; and as 0·24 instead of 0·50 in relation to fever, when compared with the average collected from twenty towns. On summing up the totals from these four diseases it will be seen that Brighton stood as yielding from them a mortality of 1·35 as against 2·57.

In respect to the three other zymotic diseases Brighton retained for the whole period a first position—namely, 1·17 as against 1·75.

In 1881 this same favourable position was held, with the exception of one disease—namely, typhoid fever.

In 1881 the mortality from typhoid took an exceptional rise in Brighton from an average of 0·24 for the preceding ten years to 0·40. In this respect the town compared unfavourably with the nineteen other towns for that year (1881), in which towns the average mortality had, strangely enough, fallen to 0·31, but it still remained favourably placed in regard to this particular disease in the same twenty towns for the ten previous years, the mortality from typhoid in them averaging, collectively, 0·50. In a word, in 1881, the typhoid mortality rose in Brighton from 0·24 to 0·40, while it fell in the other towns from 0·50 to 0·31.

The change here mentioned would have been too small to have affected the question of the past health of Brighton at all, but for the sudden phenomenon of a rapid rise of mortality in the first months of the present year from the three other diseases already named—measles, scarlet fever, and whooping-cough. In the first quarter the mortality from measles was 3·04, and in the second quarter 2·01; scarlet fever was 1·76 in the first, and 1·10 in the second quarter; whooping-cough was 2·89 in the first, and 1·25 in the second quarter; while fever (typhoid) fell to 0·15 in the first, and remained at 0·15 in the second quarter.

I have now stated the facts which have been observed. Condensed, they stand for data as follows:

Brighton, during the years 1871–80, showed a mortality below the collective average mortality of twenty large towns in England, all causes of death being included, in the proportion of 20·4 to 21·8.

Brighton during the same period showed an average of deaths from the principal zymotic diseases of 2·52, in comparison with an average of 4·32 in twenty large towns taken collectively, and the same continued throughout 1881, except in reference to one disease, fever (typhoid), of which in the collective average of the other towns there was a great reduction of mortality, with an increase in Brighton.

In the first half of the present year there was a great increase of mortality in Brighton from three zymotic diseases—namely, measles, scarlet fever, and whooping-cough.

In the first half of the present year the mortality in Brighton from five zymotic diseases—namely, small-pox, diphtheria, croup, diarrhœa and typhoid—was below the average of that in twenty-eight towns taken, collectively, with which it was compared.

With the close of the second quarter of the year 1882 the mortality from the three diseases which had raised the mortality in Brighton began to decline and to approach the former average.

Taking these as the reliable data, let me now explain the reasons for the remarkable change of rate of mortality which has been stated as pertaining to 1881–82 in Brighton.

The primary truth that comes out, and to which all the evidence points, is that the phenomena of disease and mortality, on which stress is laid, occurred from four diseases—namely, typhoid, measles, scarlet fever, and whooping-cough. This is demonstrative, and two views are open for explaining why these diseases should suddenly have broken out with so much intensity.

The first view is an hypothesis. It supposes that the diseases broke out and proved so fatal as to change the rate of mortality in consequence of local causes of insalubrity and impurity of air.

If this hypothesis were true, there must have been discoverable some great local change in the condition of Brighton; some climatic change; some change in regard to the mode of life of the inhabitants; some change by which

the public works of the town were modified or perverted. There has been nothing of the kind discoverable. There has been no unnatural severity of climate; no particular change of life or habit; no change in water-supply; and for eight years no change in the system of removing the sewage.

If this hypothesis were true, the diseases in question ought to have spread through all classes of the community as from a common cause affecting all. The diseases did not spread in that general way; they spread, as I shall show, from special origins and amongst special classes of the population.

If this hypothesis were true, the other zymotic diseases ought to have been equally influenced by the common insalubrity. Small-pox, diphtheria, diarrhœa, ought to have been prevalent beyond the extent of their prevalence in other towns. They were in fact less prevalent.

If this hypothesis were true, five other spreading diseases, not as yet named, ought to have had a prominent place in the mortality returns. I refer to croup, erysipelas, childbed fever, surgical fever, and typhus. These diseases, as essentially diseases of impure air as the diseases which were present, are conspicuous by their absence. They add so little to the mortality that they are not noticed in the official record.

If this hypothesis were true, it ought to be supported by an easy exposition of the mode in which the persons who suffered were affected by the insalubrious air. It ought to be demonstrated from what particular polluted source of water, or food, or air, the measles, the scarlet fever, the whooping-cough, the typhoid sprang. There is no attempt at such an exposition.

On all these grounds the hypothesis fails to afford the faintest reasonable explanation of the phenomena. It resolves itself into a mere term. It speculates on a common cause for which there is no common reason. It names this cause as sewer gas, while it makes no analysis of such gas to show that the poisons of the particular diseases were in it; offers no shadow of proof that the persons affected were influenced by such gas, and does not indicate why other persons escaped, nor why other poisons of disease were not also in the gas. It does not venture to assume that sewer gas produced any of the diseases named. It does not dare to prove that such gas can produce even one of the diseases, or to specify one so produced.

The second explanation of the phenomena of disease which we have discovered as leading to the change in the mortality of Brighton in the recent past, is based on clear and simple principles. It does not enter into hypothesis, but deals with well-known and obvious facts. It may be stated in the plainest manner, so that anyone who reads it can understand it.

The four diseases, together with the other of their class, called zymotic, demand for their development three conditions:—(1) A person in a state of body that renders it susceptible to, or liable to become affected with, the diseases. (2) The presence of an exciting organic particle that is capable of causing the disease in the susceptible person. (3) Contact of the susceptible person with the exciting organic particle.

There is a dispute amongst the learned regarding the nature of the exciting organic particle, as to whether it be living or dead, and, whether it come from without or from man himself, into which dispute I need not enter here. It is sufficient for our present practical purpose to know that the particle is necessary as a factor in an epidemic outbreak; that, as a rule, to which there are few exceptions, it passes from affected persons; and that, in those who are susceptible to it, it produces disease if it reaches them. The particle is absorbed by the susceptible; it is, as it were, planted in them; and, after a certain definite period, called the period of incubation, it causes in them phenomena or symptoms which are the same as were presented in the person from whom it was derived.

In every town there is a population that is susceptible to the action of these disease-producing particles; but all persons are not equally susceptible, because those who have once been subjected to them are, to a large extent, prevented thereby from becoming affected a second time.

Hence it happens, clearly enough, that young children who have never been subjected to any of the zymotic diseases, but who with very few exceptions are born susceptible to them all, are most liable to take them when infection is carried to them; and hence the facts, so well known, that the spread and mortality of the diseases of the zymotic type are largely amongst the young.

As a further rule it follows that if in any town a long interval elapses in which the zymotic diseases are absent, time is allowed for the birth and growth of a very large population susceptible to the diseases, in whom an outbreak, if it begin, will spread, and will include unusally large numbers in one epidemical attack.

This is exactly what occurred recently in Brighton. For a long period, extending over eleven years, the town had been free, beyond what is usual, from the diseases which recently were introduced. Its very healthiness, in this respect, was therefore a cause of its susceptibility to an extended outbreak, if an outbreak were once lighted, and this in relation to more than one disease of serious importance.

It happened, unfortunately, that amongst a large and susceptible population four of these diseases broke out in quick succession, three of them almost at the same moment.

I use the word unfortunately in describing these facts, but I might with equal correctness use the word exceptionally, for it is one of the rarest events I know of, in epidemiological records, that these zymotic affections should be introduced, and should extend with almost equal intensity, in the same place and at the same time. The event is a proof in itself of the freedom of the town from the diseases for a long period of time before.

The epidemics, nevertheless, might have occurred in the same simultaneous manner, and never have been commented on, but for an additional influence which was also unfortunately present. The epidemics took place at a time when all the seasonal influences were unfavourable to recovery from the diseases, and so their presence was shown by large but not under the circumstances extraordinarily large mortalities.

It was laid down by the distinguished scholar and physician, Arbuthnot, that every season has its special diseases. The saying is in some measure true, and the prevalences of diseases and of the mortality arising from them may be considered as well marked. In 1853 I made the question of the seasons in relation to diseases and mortality the subject of a special and prolonged study from the Registrar-General's returns, including in the inquiry a minute analysis of 139,318 deaths occurring between 1838 and 1853 from small-pox, measles, scarlet fever, whooping-cough, croup, diarrhœa, dysentery, cholera, influenza, ague, remittent fever, typhus, erysipelas, quinsy, bronchitis, jaundice, and carbuncle. The districts in which the diseases and deaths took place were London, Devon, and Cornwall.

Out of the 139,318 cases thus chronicled as occurring from the above named diseases, the percentage of mortality in the different quarters of the year, estimating the gross mortality according to the season, without reference to particular years, ran as follows:—In January, February, and March, 25 per cent.; in April, May, and June, 21 per cent.; in July, August, and September, 24 per cent.; in October, November, and December, 28 per cent.

Having learned thus much, I set about ascertaining, on the same large scale, whether the fatal diseases were in any way special to the seasons. The answer to the inquiry was to this effect: Whooping-cough, croup, small-pox, and bronchitis are most common in the first quarter; in the second quarter quinsy only stands ahead; in the third quarter, diarrhœa, dysentery, and jaundice take the lead, and in this third quarter also, Asiatic cholera, when epidemic, assumes a greater mortality and prevalence; in the fourth quarter, influenza, ague, remittent fever, typhus, scarlet fever, measles, erysipelas, and carbuncle take the lead.

The tables from which these facts were drawn were published in the *Journal of Public Health* for December, 1855, and they have since been often referred to and confirmed.

The most extensive and latest review of this same subject is by Messrs. Buchan and Mitchell, of the Scottish Meteorological Society, who, in the journal of that Society for 1875, published the results of thirty years' observation on the influence of weather on mortality in this country. Their analysis includes the returns of mortality of England and Wales from 1838 to 1874. From their tables we learn that the four diseases and their complications, which specially concern us at present, have the following history of season and mortality:—

Typhoid shows its maximum death-rate in October and November, extending, with gradual diminution, into Decem-

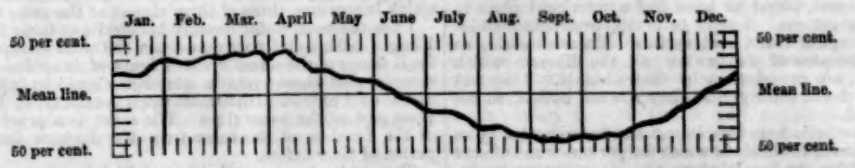
ber, but not falling below its average until the last week in February. Measles shows its maximum in November, December, and January, while bronchitis, the common follower of measles, attains its maximum in the second week of January, continuing to fall slowly, till the end of March. Scarlet fever has its maximum from the beginning of September until the end of the year, with, for ten years out of the thirty, a high death-rate continued into the year immediately following. Whooping-cough is above the average, in respect to death-rate, from the middle of December until the beginning of June, the maximum being reached in February, March, and first half of April.

The high mortality from these diseases in Brighton, in the latter part of 1881 and first half of 1882, is all in natural keeping with the facts above stated. The epidemic of typhoid took place at the moment when its mortality is naturally highest. Measles, and the subsequent bronchitis which I found was the chief cause of death, followed the same law. Scarlet fever, which began to rise in the last months of 1881, extended through the first months of 1882 before it declined. Whooping-cough, in steady observance of law, attained its usual maximum in the first four months, and then began to decline in the natural order.

Messrs. Buchan and Mitchell describe these seasonal variations of mortality from disease by what they call a curve, of which I give one illustration, selecting the curve of whooping-cough as that of a disease which is unusually free from variation.

CURVE OF MORTALITY OF WHOOPING-COUGH FOR ALL AGES AND BOTH SEXES.

Derived from calculations of thirty-four years.



I would, in passing, suggest that it would be well in Brighton to register, in future, the mortalities from all diseases on a system of curves of this kind. The precise influence of weather on the mortality would thus be retained and would prove of sterling value to the sanitary staff.

The explanation of the increased mortality of Brighton during the time to which reference is now made, is easily and clearly understandable. The diseases causing the mortality came and went away. They did not depend, obviously, on any general cause located specially in the town. They were produced by contact of the susceptible unaffected with some who were affected.

All towns, all houses even, are open to the risk of receiving infection, and amongst the most healthily regulated towns and households some contagious diseases will spread if the residents be susceptible to the action of the contagion. Scarlet fever, measles, and whooping-cough are diseases particularly easy of distribution from person to person in a susceptible population, and Brighton is inoculated, from without, by these diseases from without many times year. It would be ever under their spell if it had a population always on hand that was unprotected by previous attacks. Sometimes it will have such an unprotected population, and then, as it is no more invulnerable than other places, it will be subject to an epidemic.

All towns are exposed to epidemics from what may be called accident in the mode of distribution of the agent which lights up the spreading disease, and this particularly when the agent can be conveyed or carried wholesale in articles of food or clothing. From this accident Brighton is no more exempt than the rest of the towns of the United Kingdom, and to this last-named cause it has been subjected, as well as to the former causes to which I have adverted.

The disease called typhoid fever is one of those affections which can be conveyed extensively by food and drink, in any community, after the accident of its introduction and during ignorance of danger. The organic exciting particle or poison of typhoid is usually, and as many think always, conveyed by fluids taken into the body as drink. The poison may, possibly, be conveyed for a short distance by the air, but so little is this event feared that in some hospitals for the sick typhoid patients are allowed to remain in the general wards separated from the other patients by the mere distance of one bed from another. If, by accident, the excretions from the typhoid patient were to find their way into the water or milk or other uncooked food or drink supplied to the other patients, the outbreak of typhoid would be certain and general, however pure and good might be the surrounding air. But under less exposure to danger no evil need accrue.

The town of Brighton, then, like other towns, is liable to these two risks. It may be infected with some spreading diseases by the communication of the exciting causes of these diseases from person to person; or by the accidental distribution of the cause to many persons through substances passing as foods or drinks, after being exposed to contamination. It was in these two distinct ways that Brighton in the recent past was subjected to the four diseases which led for a brief period to an exceptional increase of mortality.

The epidemics of measles, scarlet fever, and whooping-cough were so obviously the result of spreading by personal contact that no one on the spot who watched their progress doubted the fact for a moment. It was the young children in the poorer neighbourhoods who suffered most severely. It was by a case brought into a school or a family that the mischief was introduced. The schools and families that were most isolated from the infected escaped. The epidemic of measles was not itself malignant, but it caused in many instances severe bronchitis. The epidemic of scarlet fever was not generally of the malignant type, but in densely populated parts it spread rapidly from one child to another. The epidemic of whooping-cough was similarly disseminated, and I heard of instances in which the three diseases—measles, scarlet fever, whooping-cough—followed each other in the same family. In a number of cases children just recovered from measles contracted whooping-cough. The mortality was chiefly amongst the poor, and, indeed, hardly reached any other class. The children of the Circus-street Board School for girls and infants—a school where the parents of the children are very poor—were affected by the three diseases almost in instant succession, and yielded no less than eighteen deaths. In this there is no reason for surprise, for in many cases three or four families of the infected lived in one house. They were badly clad, and some actually had no bed. I saw one of these children who, during the epidemic season, suffered, with his brothers and sisters, from measles. Their father was an industrious man but disabled, partly, from work; their mother had to go out to work. They were accustomed to come to the school scantily clothed and fed. One of them caught measles from another child, and the rest followed in turn. A lady who visited them at their home, and who was my informant of the facts, found four of them huddled together in a large chair, and in that position one died.

In the Richmond-street Schools measles, scarlet fever, and whooping-cough spread in the same way, by personal contagion, and at one time 100 children were away from school, fourteen, under the age of five, dying from these illnesses. These were mostly children badly housed, clothed, and fed, their poor parents not having means sufficient to provide the care and attention demanded. One boy sickening with scarlet fever in the school could not be taken home for a long time because the mother was out at work at a distance. In the end a little sister, who had not had the disease, fetched him home, and became herself another victim. In the St. John's and Hanover-terrace Schools the epidemics spread in like manner, St. John's yielding twelve and Hanover-terrace four deaths from amongst their scholars.

It is unnecessary to enter into further details in respect to the mortality from the late epidemics of measles, scarlet

fever, and whooping-cough. They were dependent in no way on any special agent, like sewer gas, or other cause of a general kind, affecting the air of Brighton. They depended on the natural development, in a susceptible community, of three contagious diseases, occurring in poor and overcrowded localities, at a period of the year when these diseases are always most fatal. They depended for their unusual diffusion on the unusual coincidence that these diseases had for a long time been in abeyance, and were accidentally lighted up all at one time. In any town in the kingdom the same results would occur under the same circumstances, according to our present knowledge, and they will continue to occur until the day arrives when there shall be no poverty and no exposure of the young to those who have contracted contagious diseases; a time, that is to say, when the poorest children of Brighton shall be as well placed as those other school children also there, who, as I have shown in the first section of this report, escaped so remarkably.

The outbreak of typhoid fever in the latter part of last year was accidental in respect to distribution. All the evidence obtainable points in that direction, and is as near to proof as such evidence can be, while there is no other evidence of any kind to explain the outbreak. The facts, in short, are these. In the third week of September last there was a case of typhoid in the Lewes-road, which was quickly followed by other cases. Very soon the suggestion was made that the attacked were persons who had partaken of milk from a certain dairy supply in the Lewes-road. The suspicion was not at all surprising, because it originated from facts of common observation. One gentleman, who lost a child from the epidemic, gives me, for instance, the following report. His son and four of his daughters being in Lewes-road in the third week of September, went into the dairy or milk shop referred to, where the son and *three* of the daughters drank of the milk supplied. All those who partook of the milk began to sicken towards the close of the following week, and were found by Dr. Stephens to have typhoid fever, from which one died. The one who did not partake of the milk did not suffer. Here there were five evidences in proof of the source of infection—(1) That four persons who were subjected to the same possible source of infection were all affected. (2) That the affected fell ill at the same time, proving exposure at the same time to the same producing cause. (3) That the first appearance of symptoms ending in typhoid, calculated by the natural period of incubation of typhoid, from nine to twelve days, points to the date when the milk was taken as the date of infection. (4) That the one who was not subjected to the possible source of infection was not affected. (5) That there was at the time, in the house at which the milk was drunk, a case of typhoid. Since the period when the outbreak of cholera in London was traced so circumstantially to the water of the pump in Broad-street, Golden-square, there has been no more conclusive evidence given of a local source of infection of a spreading disease.

The theory of the origin of the outbreak from the centre I have named was soon under the observation of your medical officer of health, Dr. Taaffe, and of your analyst, Mr. Moore, who added to facts similar to those I have just recorded further valuable evidence, which was reported by Dr. Taaffe to the Sanitary Committee, and which I may here summarise under four short heads—

1. That milk taken from the dairy in question on Sept. 28th had in it 20 per cent. of water that had been added to it, and that such water was foul or contaminated, the milk being of bad odour, undergoing rapid lactic acid fermentation, and yielding a cream which at 80° F. developed fungoid growths; a milk evidently unfitted for consumption.

2. That there was a source or sources on the premises of the suspected shop from which the contaminated water could have been obtained, the water of the premises being held in two cisterns, each over a watercloset, and that the water from one of these was contaminated, showing ·08 of free ammonia per million, ·23 of albuminoid ammonia, a deposit of wheat starch, confervoid aggregated corpuscular bodies, and some monads.

3. That of 91 families who drank of milk supplied from this source, 26, or 1 in 3·5, were attacked by typhoid, all the persons falling ill about the same date.

4. That of 696 families in the neighbourhood supplied from other dairies, only 27 (1 in 25·7) were attacked, and that all these cases, with two exceptions, which occurred about the 22nd to the 24th of September, happened subsequently to the end of September.

Putting all these facts together, and coupling with them the further fact that the carekeeper of the suspected house in Lewes-road was suffering from typhoid on September 22nd, from which date the epidemic dates, Dr. Taaffe reported to the Sanitary Committee his opinion that this epidemic of typhoid was due to a local cause—namely, to water contaminated from a closet or from closets of a house from which milk was supplied, and with which such water had been admixed.

I confirm this conclusion on every point. Without the least strain it explains all the mystery, and while it relieves the town, as a corporate body, from responsibility, it is an intimation to all individuals who supply vital public wants of the responsibilities which rest upon them if they fail, from any cause, to avail themselves of the advantages of a sanitary kind which are placed at their disposal, or evade the rules which are laid down by the common consent of elected authorities for the common good.

The municipality of Brighton can no more than that of any other town be held responsible for individual error in respect to distribution of disease. It might as justly be held responsible for the distribution of fire. It can concert general measures and offer counsels against the origination and spread of disease and of fire; it can appoint inspectors to see to the state of buildings; it can provide a skilled sanitary officer or captain to stamp out disease or fire; it can provide an ambulance or a fire escape; it can provide a hospital for those who are injured by disease or by fire. But it can no more be expected to look after every man's water-closet and water-cistern than after the turning out of his gas at night or the safety of his lucifer match-box.

Taking all the facts into consideration, I have to report that, with the exceptional occurrence of four fatal contagious diseases occurring between the 22nd of September last and the close of the second half of the present year, the health of Brighton for many years past has been unusually good and free from epidemic disease. I have further to report that the mortality from four diseases in the epidemic period defined was due to accidental and social, as distinguished from any general causes affecting the town altogether, and that the town has been singularly favoured in respect to the prevalence of the other diseases of the contagious and epidemic type.

THE WATER-SUPPLY OF BRIGHTON.

In 1864 the water-supply of Brighton was reported on by me as "unlimited and pure." I have nothing to add to that statement, and nothing to take away.

There are two sources of supply: one from the Goldstone, the other from the Lewes-road Works. I have had the opportunity at the Goldstone Works of descending to the sources of supply, and of seeing the water as it is laid up in the huge reservoirs in the chalk from which it is pumped and supplied to the town. The Lewes-road supply differs little in character from the Goldstone, and both are excellent. The waters were reported upon by Professor Frankland in March last; but, in order to make this report complete up to the latest time, I took specimens of both waters from the supplies on Saturday, July 8th, and submitted them for analysis to Mr. Wynter Blyth, the author of the admirable practical work on "Foods, their Composition and Analysis."

Mr. Blyth's report is herewith subjoined.

"Department of Medical Officer of Health,
Court House, St. Marylebone, W.,
July 15th, 1882.

"I beg to submit a report of the result of my analysis of the Brighton water. The values of the analyses, conducted on the usual principles, are thrown into the annexed table, so that they may be compared with the analyses made by Dr. Frankland in March, 1882.

No. 1. Main pipe, Goldstone Works.

"This water was perfectly bright, clear, and palatable; no sediment was deposited on standing, and a microscopical examination indicated entire freedom from any impurity detectable by the microscope. The chemical data show that there is an entire absence of free ammonia; low values for carbon and nitrogen; and just sufficient hardness to give a

pleasant taste. The saline matters in the Goldstone water may be expressed in grains per gallon, as follows:—

Carbonate of lime	12·880
Carbonate of magnesia, with some nitrate and a minute quantity of sulphate ...	5·087
Chloride of sodium	3·290
	21·257

"The amount of carbonates of lime and magnesia that the water holds in solution depends mainly on its content of carbonic acid gas, and therefore varies at different times of the year; nevertheless, the "hardness" and the total solids in the March analysis very fairly agree with the figures in the July analysis. The value of such a supply of water of a constant composition is great.

"*No. 2. Lewes-road.*

"This water was found equally clear and palatable. The difference in composition between the two waters is unimportant.

A gallon of No. 2 contains the following saline constituents:—

	Grs.
Carbonate of lime	13·44
Carbonate of magnesia, with some nitrate and a trace of sulphate	5·46
Chloride of sodium	3·62
	22·52

"No 2, like No. 1, is free from any impurity.

As a whole the water-supply of Brighton is of a first-class character, and it is one of the purest waters of its kind I have ever examined.

Result of Analysis of Brighton Waters expressed in parts per 100,000, by Mr. Wynter Blyth.

A.D. 1882.	Total Solid Matters.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen as Nitrates & Nitrites.	Total Combined Nitrogen.	Previous Sewage Contamination.	Chlorine.	Hardness. Temporary.	Permanent.	Total.
No. 1.—Goldstone, July	27·57	·150	·050	..	·500	·650	..	2·8	12·1	7·3	19·4
Ditto, March (Dr. Frankland's Anal.)	24·80	·148	·054	..	·450	·504	..	2·8	12·4	7·0	19·4
No. 2—Lewes-road, July	32·4	·170	·039	..	·445	·484	..	3·1	14·7	7·7	22·4
Ditto, March (Dr. Frankland's Anal.)	27·00	·126	·039	..	·435	·474	..	3·0	12·8	7·5	20·3

(Signed) A. WYNTER BLYTH."

The report of Mr. Blyth sufficiently describes the state of the Brighton water at this time, and as there is no prime source from which the water can be contaminated, it may be accepted as one of the purest supplies, as well as one of the most unlimited.

Like all waters derived from the chalk it is naturally a hard water, but, as the mayor pointed out in his paper at the late Health Congress, it can be softened by a very simple domestic process. From the nature of the supply it is only from the most culpable negligence that the Brighton water can be made a medium for the conveyance of disease.

In every house the water can be laid on in constant supply, and there is no occasion for an intermittent supply anywhere. Gradually, throughout the town the constant supply is being laid on, and, when that is universal, such an accident as the spread of typhoid through milk charged with water from an impure cistern will be practically impossible.

The system of hydrants possessed by the town by which water, used for extinguishing fire, can be carried to any required height without an engine, is much to be commended. No town in the kingdom is, I think, so well provided for in this respect as Brighton.

THE SEWERAGE AND DRAINAGE OF BRIGHTON.

I come now to one of the most important parts of my report, the sewerage and the drainage of the town of Brighton. In approaching this subject I desire to make two distinct statements.

1. All through my career as a sanitarian I have been a consistent advocate of the separate system of drainage and sewerage; I have contended, and, far from altering my opinion, I am the more inclined to contend for it every day, that for a town to be scientifically and perfectly drained two conditions are necessary: (*a*) That the sewage from the houses be conveyed away by its own separate system, with a sufficiency of water to carry it equally on all occasions, and perfect flow at all times to ensure its delivery, whatever may be its ultimate destination, to the land or the sea. (*b*) That the rain or storm water should be separately disposed of. In Brighton this system is not carried out, and if I had had a voice in the system that was adopted prior to 1871, I should have been the most strenuous of those who would have declared for it. Mr. Edwin Chadwick, who has been so devoted to the advocacy of this separate system, would not have been more earnest than I should have been in its favour.

2. But while stating this position, in the strongest manner, as the one I personally take, I am bound in honesty to admit that I can discover in Brighton no evidence of disease as originating from the system which has been adopted, and which lets the storm water and the sewage commingle and escape by a common intercepting canal and outlet. On the contrary, I am forced to the conclusion, from the weight of the evidence before me, that the facts derivable from an unprejudiced study of the records of disease and the causes, are as favourable to the present system, so far, as I could have expected from that which I should always advise and prefer.

The dangers presumed to be attendant on the present system are that the large sewers which are necessary to carry the two supplies, sewage water and storm water, have to be freely ventilated so as to allow the gases which emanate from the sewage to escape into the air. If this be not done, it is assumed that the sewer gas will escape back into the houses and contaminate them.

Again, it is assumed that when the sewers are ventilated in their main lines, the ventilators being in the roads beneath which the sewers are laid, there is an escape of sewer gas into the streets; and that when the streets run in ascents, as at Brighton, the gas rises to the higher levels and finds escape there with special freedom, and this particularly when the main exit for the sewer is tidelocked and there is an accumulation of sewage in the intercepting canal.

The hypothesis, if it be true in a physical sense, is not sustained by the results of disease as they are manifested at Brighton.

The precise relations of sewer gas to disease are as yet indifferently understood, very few observations having been on the subject. The late Dr. Barker, of Bedford, who made one of the best researches that has ever been conducted on the effects of sewer air, concluded that cesspool and sewer emanations, when they are steadily inhaled, are poisonous, the symptoms of disease induced being those of intestinal derangement, followed by prostration, increased temperature of the body, distaste for food, and those general signs which mark the milder forms of continued fever common to the dirty, ill-ventilated homes of the lower classes of the community.

It has been more recently indicated, from experience, that the fever which follows childbirth is sometimes induced by sewer air. It has also been indicated that typhus, surgical fever, erysipelas, and diphtheria may be produced by the inhalation of sewer gas.

If these inferences be true, then Brighton is singularly free from the effects of sewer air. Typhus is practically unknown in Brighton; that continued fever which Dr. Barker describes is in no return that I can find, and if it be in any I have not seen it must be extremely rare; childbed fever is also most uncommon; and surgical fever is equally so; erysipelas is comparatively rare.

Diphtheria, which some have assumed to occur from sewer gas, is very rare. From 1871 to 1881 the mortality from it was lower in Brighton than in nineteen other large towns on the average computation. In the first quarter of this year the mortality from it in Brighton was 0·07 to 0·18 in the other towns. In the second quarter of this year only has it come up to the average, and in respect to three of the cases that helped to raise the mortality from it in the second quarter the facts are specially peculiar. In one case the child was brought into the town with the affection from

London, in the hope that the sea air might cure it. In the second case, as I found from the report of the physician in attendance, the child sickened on the second day after arrival in the town, which, giving only seventy-two hours for incubation, excludes Brighton as the centre of infection, or, at least, renders it very improbable. The third case was one which, if of local origin, was so complicated in respect to origin that no clear evidence of an explanatory kind could be obtained. The patient, in wet clothes, sat in a crowded miscellaneous assembly at the Aquarium before being seized with the disease. She was believed to have been exposed to a bad odour from the ventilator of a sewer, but I found the most contradictory statements as to the character of the odour, and even as to the existence or non-existence of an odour or emanation of any kind. Further, although I was informed that five cases of sore-throat had occurred some weeks before in the same house, and recovered, I could trace no other case of diphtheria in any other house near to the ventilator, though some were nearer to it than the house in which the case occurred. Lastly, I could get really no satisfactory proof that the affected child had been exposed to any emanations from the ventilator. I have seen so many cases of diphtheria, in children predisposed to the disease, coming on from cold, after exposure to fatigue and wet, without any suspicion of exposure to sewer air, that I dare not, for my part, accept in this case the hypothesis of contraction of the disease from inhaling sewer gas, unless I was sure of these primary facts. Firstly, that the child did inhale sewer air. Secondly, that the contents of the sewer air had been charged from another case with the specific poisonous organic particle. Thirdly, that the period of incubation of the disease was in accordance with the period of inhalation of the poison. Fourthly, that other persons equally exposed were also affected. In the case in question, not one of these facts was forthcoming or obtainable.

I repeat, then, that while the system of disposal of sewage at Brighton is not the one I should have suggested, I have found no evidence whatever that the sewage has proved a source of zymotic disease. On the contrary, I am forced to the conclusion that the zymotic diseases which might be attributed to sewer gas have been less fatal in Brighton than in the other towns of equal size for many years past, and singularly so during the time that the present system has been in operation.

On the question of the condition of the sewers and drainage system of Brighton, as it is at present, I have used every endeavour to become thoroughly and practically acquainted.

I entered the main or intercepting sewer of the town at every available part. I traversed it for several hundred yards. I noted its outfall, its construction, and the points where it received its tributaries. I also made observation on the force of the air that passes through it. I inspected, as far as possible, the main sewers leading into the intercepting sewer, the sewers leading from the streets into the mains, the drains leading into the street sewers, the manholes leading down into the sewers, and the sewer ventilators. I went at various times of the day, and late into the night, to the ventilators in different parts of the town, to notice if there were emanations from them; and, accompanied by Mr. Lockwood and his staff, I took part in the process of flushing the sewers with water through the manholes, in several parts of the town.

My inspection of the intercepting sewer commenced at the outfall at Portobello, four miles to the east of Kemp Town, at a time when, the tide being low, the contents of the sewer were being discharged into the sea. The outflow gave abundant evidence of discharge of recent sewage from the town, and the penstocks and gates at the outfall were all in good working order. Proceeding towards the town on the sea side, in the line of the sewer, I entered it again at Roedean, where I found valves placed across it which opened in the direction of Portobello, to let sewage and air pass on, but which prevented them from passing back towards the town. The valves were in efficient working order. I found here also a furnace and shaft, which had the effect of drawing off, from the part of the sewer which lies towards the town, some seven thousand cubic feet of air per minute. The air passes over the flames of the large furnace and escapes afterwards by the tall shaft. I next followed the sewer from Black Rock to the Steyne, where I entered it to inspect the discharges of the main from the northern and Marine Parade sewers and the catchpit in the Steyne valley. I took readings here again of the air currents, and I walked through the sewer back to the Chain Pier. I next followed the sewer to its commencement at the western end of Hove and entered it again there.

From Hove to the Steyne the sewer is five to six feet in diameter, gradually increasing in size to seven feet at the Steyne, and retaining that size during the further part of its course. It is well built, and cannot, I think, permit leakage. Mr. Lockwood supplied me with the measurements, with the height of the invert at Hove, one foot six inches above high water at spring tide, and of the invert at Portobello—viz., the low level of low water at spring tide. He also gave me the measurements of the fall—namely, three feet per mile; and the rate of flow—namely, one and one-third to one and a half miles per hour. In the length of Hove the sewer receives thirty house drains directly, and eleven or twelve sewers. From the Aquarium there are three outfalls into the sewer; they are flapped on the sewer side, and the flaps are in very good order. At the Steyne the main valley sewer joins the intercepting sewer, and there is a large storm overflow at this point. The sewage of the part of the town lying to the east of the County Hospital enters at Black Rock, and there is another storm overflow at that point.

The air of the intercepting sewer is much less offensive than would be expected. At the time of my inspection the odour of parafin prevailed over everything, and I learned from the men that this was usually the case. The insoluble parafin, residue of lamps, passes into the sewer, floats on the surface of the sewage, and gives out its characteristic smell. The sewage was from fifteen to eighteen inches deep in the sewer at the point where I traversed it, between the Steyne and the Chain Pier. It decreased towards the west, and at Hove was not more than from nine to twelve inches in depth. There was very little solid matter under foot. At one place, a little distance from the catchpit in the valley of the Steyne, there was a little accumulation of silt, which had been carried from the catchpit probably before the emptying of the pit in the morning. The masonry of the sewer is of brick, well laid, and seemed to be good in every part. I ascertained from Mr. Lockwood, in respect to the proportion of storm and town water to sewage, that the sewage in dry weather varies from 6 in. to 15 in. in depth, or from about 200 to 500 cubic feet per minute; and that the sewer, when fully charged with rain-water, discharges 8000 cubic feet per minute. About thirty gallons of water per head of the population of Brighton and Hove finds its way into the sewer, or 600,000 cubic feet, equalling 3,750,000 gallons per day of twenty-four hours; but in dry seasons this is increased by special flushing. During the time of my inspection in July nearly 100 tons, or about 23,000 gallons, of water were passed into the sewers in a day for flushing them. Twice in the twenty-four hours of each day the sewage of the town is locked up in the intercepting sewer in consequence of the rising of the tide, the time during which this locking occurs being rather more than half the full day. It is calculated that the capacity of the intercepting sewer is such that it would hold, during the periods when it is tidelocked, more than twice the amount which it receives from the town in dry weather.

I should add to this account of the intercepting sewer that I experienced no ill effects from being so long in it while making my inspection, and that since it has been in use none of the surveyors or inspectors have ever suffered from inhaling the air within it.

During the period of my inquiries I received many communications respecting the emanations of bad odours from the ventilators in the streets. This led me to visit the reported places at different hours. I found, in the same way as is found in London, that sometimes there was a sewer smell, never intense and not always present. In the supposed worst cases of which I was informed the evil turned out to be due entirely to different causes. In the most offensive instance of all the cause of the stench proved to be an escape of gas into the earth in a narrow street; the ventilator was quite free of odour. In another instance the offence attributed to a ventilator was from dead animal matter cast into a heap near the ventilator. In a third instance it was from dead sea-weed. In some other instances the cause seemed to me to be different, and to be due to neglect on the part of householders to connect their drains satisfactorily with the sewers. In these instances the smell is not from the ventilators nor from the sewers, but from the houses themselves or the areas. From neglect of another

kind the houses in Brighton, as in London, are made often abominably odorous by the nuisance of dust-bins into which decomposing animal and vegetable refuse is thrown. There is no proof that the odours evoked from the dust-bin produce any form of specific disease, but they give the place where they are detected a bad name, and in time of anxiety a far worse name than it may deserve.

Altogether I found the working of the sewerage and drainage of Brighton entirely different from what I had been led to expect. I found no sewage deposit in the sewers; no leakage in the intercepting sewer; no special indications of escape of sewer air into houses; and as little of emanation from the ventilators as in London. I found, in short, nothing whatever that would lead me to believe in the occurrence of any special disease or mortality from bad drainage.

Connected with the sewers in the streets I found at convenient distances a series of manholes, leading down to the sewer, by which the men can descend by iron holds or steps. The sewers can be closed by a large wooden plug at the bottom of each shaft, and the shaft itself can then be charged with from two to three tons of water for flushing. These manholes or shafts in some cases are used as ventilators, the opening to them being covered with an iron grating; in other cases the grating is closed in with a covering of cement and stone. The covering is removable by the use of a key and lever. In addition, for the purpose of the ventilation of the sewers there are inserted in the lines of the sewers a series of open ventilators.

The rain and storm water is let into the sewers by trapped drains in the streets and by trapped drains from the houses. In many of the houses the water of the house that does not pass through the waterclosets, the water from the roofs and from the baths, is made to flow into an open air space in a back yard before it flows into the drain.

The soil-pipe connected with the houses is usually placed at the outside of the house, and in all new houses is systematically so placed. It is usually an iron pipe. In a large number of houses I found a ventilating tube, open at the top, carried from the top of the soil-pipe to a point above the parapet of the house. The pipe varies in size in different houses, from three inches in diameter to less than an inch—a ridiculous smallness. In the large majority of houses I found the watercloset system adopted, but there were some in which the old closet system, without water, is continued. The old pan watercloset is still in general use, but in many houses the better and safer closets by Underhay, Jennings, Bostel, and others are introduced.

It is correct for me to report that in the schools and in nearly all the institutions where numbers of the young are congregated, I discovered the utmost anxiety to have everything done that could effectively be done for the perfection of the drainage of the house, separation from the sewers and removal of offensive odours. In these efforts there has been great success, and I was unable to detect in any house I visited the bad smell which indicates a communication with the sewers.

THE ROADWAYS AND PAVING OF BRIGHTON.

The roadways and side paving of Brighton are on the whole exceedingly good. In some of the streets where the ascents are very steep and where the surface of chalk has not been overlaid by firmer material, there are considerable inequality and roughness with indifferent sideways, and in these situations there is, I am informed, the utmost difficulty in maintaining an equal roadway and sideway. During storms the water comes down in a deluge, and, when the street is narrow, sweeps all before it, rendering the firmest paving and road loose and insecure after a short time, although every possible provision be made for conveying away the water by the gully holes into the sewers. This carrying down of detritus from the steep streets into the main lines of thoroughfare is, I should assume, a cause of unusual trouble to the authorities, for I found, on going into some of the thoroughfares in the early morning after a wet night, a large accumulation of road sand and detritus into them, which must call for a great outlay of labour to secure removal. It must be removed, and the authorities, however active they may be in meeting this serious difficulty, are not always able to cope with it when there is a prolonged fall of rain. The main thoroughfares are kept in good repair, and the sidewalks are, as a general fact, sound and dry.

Recently along the Marine Parade an asphalte walking path is being laid down, which will prove extremely convenient to foot passengers.

THE SLAUGHTER-HOUSES, COWSHEDS, AND BAKERIES OF BRIGHTON.

In the course of my inspection I visited, in company with Dr. Taaffe and his chief inspector, Mr. Hawes, the slaughter-houses in Brighton, and in nearly every instance was present at the time when the men in the houses were at their work. The number I inspected, in actual occupation and work, was sixty-two.

The requirements of a perfect slaughter-house are—1. A good and efficient entrance and exit. 2. Good lairs in which the animals about to be slaughtered may be comfortably and cleanlily housed, away from the slaughter-house itself, yet convenient to it. 3. A good clean slaughter-house, well drained, well floored, well lighted, well supplied with water, well furnished with all kinds of necessary implements and machinery, well provided with a place for slaughtering, with a distinct place for dressing the carcases, and with good arrangements for removing the offal. 4. A wholesome place apart from the slaughter-house for storing the carcases after they are dressed. 5. An outer place for collecting the refuse in such manner that it can be cleared off the premises as soon as the work of each day is done. 6. A staff of slaughterers and dressers who are rapid, humane, and efficient in the execution of their task, and who study to keep themselves and the place in which they work tidy and scrupulously clean. 7. Lavatories for the men, where they can rinse and wash their hands in basins set apart, and not in the pails in which the water for washing the carcases is held, and, where they can dry their hands on towels specially supplied for that purpose.

I regret to say I cannot report any general adoption of these rules for Brighton. There is no public abattoir, and the private registered slaughter-houses are no better, as a rule, than those of London. With very few exceptions they are extemporised or imperfectly constructed buildings, arranged on no system whatever, and only kept commonly decent by the incessant watchfulness of the inspectors. It is just to report that I found one or two remarkable exceptions to this statement. In these exceptional houses, and in one of them especially, there were such excellent arrangements that were all like it nothing would be left to be desired. Unfortunately, these good specimens of slaughter-houses, in which the arrangements I have outlined above were systematically carried out, were but contrasts to very bad ones. In many instances the lairs were dark, dirty, and inconvenient; in other instances, though the lairs were better, the slaughter-houses were very bad. Generally where the lairs were dirty and close, the men at work were slovenly and dirty. In too many instances the lairage, the slaughter-house, the slaughtering were all equally at fault. There were, however, throughout, two saving clauses. The houses and lairs were connected with an open yard, so that ventilation was more efficient than could be expected at first sight, and the water-supply was abundant and good. Recently, good drainage has been enforced, and whitewashing of the walls of the inside of the building, by which offensive odours from the slaughter depôts are much prevented.

It was my intention to have reported on the slaughter-houses in greater detail, and to have named certain of them for which there is but one remedy—namely, to sweep them quite away. But inasmuch as I shall have to offer a recommendation before I conclude, which will have reference to a new and completely revised system, it is sufficient for me in this place to observe on the general conditions that were presented to my notice.

I inspected, with Dr. Taaffe and Mr. Hawes, the cowsheds of the town, to the number of forty, all of which are registered and under regular sanitary inspection. In these I found the greatest diversity. In some every attention was paid to cleanliness, to the admission of light, to the supply of room to the animals, to the purification of the stalls, to the drainage, and to the cleansing of the utensils. In others the commonest rules for the maintenance of cleanliness and of health were only maintained by incessant inspection from the officers appointed by the authorities, the directions issued from the department of the medical officer of health, and the attention of the veterinary surgeon to the health of the animals. The common faults were deficient space, closeness of air, inattention to cleanliness, partial cleansing of walls, in some cases, a perfect roofing of cobwebs on the ceiling, bad arrangements for storage of forage and food, imperfect arrangements for cleansing of utensils, and sometimes sad want of cleanliness in the attendants.

These faults in Brighton, as in almost all other large towns, were conspicuous. It is a bad and unwholesome practice enough to keep cows shut up in one place for months together, merely to yield milk for the population. It is very bad for the population, for the cows themselves, and for the profits of the owners of them, when the animals so imprisoned are deprived of the first essentials to health, pure air, clean bedding, clean food, and sufficient space in which to move and rest. I shall venture to recommend an improvement in relation to the cowsheds at the conclusion of this report.

I made an inspection of the bakeries of the town, and in one instance was exceedingly gratified with the practical and excellent arrangements which everywhere prevailed. The bakery in this instance was very large. In the smaller bakeries there was less convenience and order, but, compared with what may be seen in London and in many other large towns, Brighton stands out uncommonly well in the bakery department. I met with no cellar bakeries; I met with none that could be called uncleanly; in some of the smallest there was a strict attention to cleanliness, and, in brief, I did not see one from which I should have objected to eat of the bread prepared in it.

In summing up this part of the report, I should say that the slaughter-houses are as a whole no better and no worse than in other large towns where private slaughter-houses remain; that the cowsheds, generally, are neither better nor worse than in other towns; and that the bakeries are, comparatively, good.

THE COMMON LODGING-HOUSES OF BRIGHTON.

The common lodging-houses of all our large and populous towns are very liable to become centres of contagious diseases. These houses are, by the nature of their service, daily open to infection, since they receive new occupants every night, who come from different parts of the kingdom, wayfarers, the poorest of the poor. The houses are, as a rule, situated in poor localities, and are limited as to space. Brighton is no exception to these disadvantages, but, indeed, is rather a special sufferer from them. It has to supply eleven of these common lodging-houses, and they are placed in the north-eastern district, in Egremont-street, Derby-place, Chesterfield-street, and Cumberland-street. Accompanied by Dr. Taaffe and Mr. Hawes, I visited every one of these houses and every room in them.

The houses are in an old and bad quarter of the town, many of them are in a dilapidated condition, and the rooms are low and small. The beds and beddings are poor, but in all cases clean. The staircases, the floors of the rooms, and the windows of the rooms, are kept very clean. The kitchens, where the lodgers cook their own food, are fitted with fair cooking appliances, are well supplied with water, and are clean and free from bad odours.

The yards at the back of these houses are open freely to the air and are fairly drained, but badly paved. In them are open closets, which are clean, but to which the water is not laid on. The closets are kept clean by the process of carrying water to them in pails. They empty into the sewer and the drains leading from them are trapped.

It will be seen from this statement, which I have endeavoured to make as precise and brief as possible, that these common lodging-houses are not of a kind to which the sanitarian would append any word of commendation. At the same time I must, in truth, admit that I discovered no disease present in them, except in one man, who had just returned from South America, and who was suffering from a remittent or intermittent attack, to which he had been subject, at intervals, for many months previously. He was lying in his clothes on one of the beds, but had been out in the day and had visited the out-patient department of the Sussex Hospital. The houses were fully occupied, and the beds, which I counted as over a hundred in number, were considered to be too few for the wandering applicants from all parts who were likely to require them. But there was no record of disease beyond what I have named, and I could not trace that the houses had been visited at any time by any class of epidemic affection.

I shall append a recommendation as to these common lodging-houses in the last part of my report.

MORTALITY OF BRIGHTON.

I have now to bring under consideration the important question of the mortality of Brighton, about which so much has recently been said and written. I have to inquire whether there is anything that is exceptionally wrong in regard to the rate of mortality of this town; and, if there be, what are the causes of the error, and what steps should be taken to remove it.

In order to arrive at a clear understanding of this question I have availed myself of every reliable source of information. I have studied all the mortality returns for the past twenty-five years; the reports of the learned medical officer of health since the commencement of his labours, and the reports of the various medical and other charitable institutions. I have also had extracted from the local records of mortality the deaths of visitors occurring in Brighton during the past five years, in order to determine if visitors were subjected to any special risks from the contagious diseases or from other diseases that might be considered peculiar to the place.

Before I notice the details which I have been able to collect, it is necessary for me to treat briefly on the subject of mortalities in different localities and in the country at large. With my distinguished friends, Mr. Edwin Chadwick, C.B., and Dr. Wm. Farr, F.R.S., I have for many years past seized every fitting occasion for placing before the people the facts relating to these mortalities and the means of reducing the mortalities of our communities to what we consider a natural and model figure. At one time we were criticised as putting forward extreme views and as holding out hopes for the reduction of death-rates which were never likely to be fulfilled in our day. When we began to treat on this subject a mortality of 25 to 30 in the 1000 living was not considered remarkable, and when, therefore, we spoke of this as being more than twice above the natural average and twice what the natural average would be under proper sanitary regulations, it was no wonder that the assumed reduced estimate was considered as Utopian.

We have lived to see the day when the results have fully justified our expectations, which were, in fact, never too high; and we have lived, I am happy to say, to see the day when the public mind has not only become indoctrinated with our views, but so fastidious in relation to them that the death-rate of a town, in which residence is contemplated for a long or short time, is looked upon with as much care and attention as position in regard to railway accommodation, and the other conveniences and necessities which make life enjoyable.

At the present moment there are varying death-rates in English towns from the model low to the unnatural or excessively high. These may be divided in groups as follows:—

Group 1.	Death-rate from		8 to 12	in the	1000	
,, 2.	,,	,,	12 to 16	,,	,,	
,, 3.	,,	,,	16 to 20	,,	,,	
,, 4.	,,	,,	20 to 24	,,	,,	
,, 5.	,,	,,	24 to 28	,,	,,	
,, 6.	,,	,,	28 to 32	,,	,,	

There are very few towns as yet which have attained to the perfection shown in the first of these groups, perhaps none that through a series of years have attained to it. A few towns especially favoured in respect to population, situation, and wealth have attained to the position of the second group.

Brighton may be placed in the third group. The country altogether may be placed in the fourth.

It must not be considered that those towns which belong to the best of these groups are always favoured by having mortalities which lie within the figures stated above. In group 2 the mortality does not always come under 16 nor above 12. It sometimes runs over the one and under the other, owing to the effects of one or two interfering causes: (*a*) extreme reduction of temperature; (*b*) an outbreak of one or more of the diseases of the so-called zymotic type.

The first of these interfering causes occurs usually towards the close of winter, when great increase of cold succeeds upon a long interval of wintry weather. Then the feeble aged and the feeble young, together with those suffering from exhausting diseases like consumption of the lungs, die in great numbers and swell the mortality tables. The mortality from these causes is somewhat regular in its character. It is less in certain years than it is in others, because the seasons of some years are milder than of others; but it is always under certain rule, and can be calculated upon so as to be considered a fixed quantity, if a sufficient number of years to produce an average be taken into the calculation

The second of these interfering causes is less certain in the order of its manifestation, and is most difficult to predicate upon, although the causes are, no doubt, under the direction of some simple, but as yet undefined, natural law. The general results over a large tract of country are calculable, and the general results in any particular time are also calculable when a sufficient number of years are given, through which to allow the seven to ten diseases that produce the mortality to take their course. But there is sufficient of variability to cause at particular seasons the most deceptive appearances. Sometimes an unusual credit is given to a place owing to apparent freedom of mortality from the zymotic affections. At other times panic is excited in the same place because the zymotic diseases are so rife and fatal.

Two circumstances lead to these marked fluctuations in the mortalities from the zymotic affections. One is that the diseases themselves ordinarily attack every person once in life, but having once attacked, leave the person in whom they have been developed free from subsequent attacks. There are exceptions to this rule. Some persons escape the diseases, or certain of them, altogether. Other persons are susceptible to them all, or to certain of them more than once. But these exceptions do not materially affect our argument. In the large majority of instances, everyone born is liable to the diseases if exposed to the poisonous particles which lead to their development. There is, consequently, always growing up a population ready to become affected, which population, after it has passed through the ordeal of bearing the diseases, is acquitted of further evil from them. It happens then, sometimes even in large populations, that the diseases enter a susceptible community, scourge the members extensively, and then, the susceptible being either killed or protected by the attack, the place is left free from further pestilence until a new and susceptible generation has grown up in it, and a poisonous inoculation from without has affected those ready for its action.

In a previous page I have shown that Brighton has recently been subject to this serious invasion of disease after a long period of comparative immunity. I have shown that not one but three of the most fatal of the spreading diseases —viz., scarlet fever, measles, and whooping-cough—were present at one and the same time, and in the period of the year during which those diseases are most destructive to life.

It is necessary to keep all these facts in mind in estimating mortalities, because they account for the accidental variations. In the June quarter of the year 1881 the mortality of Brighton was 16·6, being as low on two weeks in the said quarter as 12·6. In the same quarter in 1882 it was 21·8, and in some weeks of the same quarter in 1882 almost double what it had been in the corresponding weeks of the previous year. Within those two periods the sanitary state of the town had not varied, but during and before the time a susceptible population was growing up ready for the invasion of the zymotic diseases which broke out in 1882.

The mortality of Brighton may be taken for the five years ending with 1881, as at the rate of 19·6 per 1000. In the first quarter of the present year it ran up to the rate of 29·2 owing to the epidemics so often referred to. In the second quarter of this year it fell back to 21·8 in the 1000, and in the present quarter it has continued to decline towards the usual rate of 19·6. If the death-rate in the present and coming quarter should correspond with the rate of the same two quarters of last year, the mortality of the five years ending 1882 will be 20·3 to the 1000, which may still be expected to be under the average of London, of twenty large towns, and of the kingdom at large during the same period.

From a theoretical point of view, resting possibly on the known laws of mortality in relation to population, these facts of the mean mortality of Brighton are what would be looked for. The relationships of population and mortality are so close, where a large mass of population exists in one town, that the fluctuations may, largely, be estimated by the population, and Brighton within the third range is in the place where it would be expected to be found when all the facts relating to it are considered.

It is urged, however, that Brighton from its position on the sea and from its being a health resort and place of pleasure ought to present a lower mortality than other towns of the same size that are less favourably placed. No one assumes that it could be expected to rival small seaside resorts of five to six thousand persons, where almost every house stands in a garden, where there are comparatively no poor, where isolation from infection is perfectly easy, where there are no large hospitals, charitable institutions, nor workhouses, where the inhabitants are of steady number, and where the visitors come in much smaller numbers to enjoy themselves or seek for health.

But if Brighton cannot compete with such places in which the mortality is usually in the second range or even just within the first, it ought, it is said, to come within the second range as a general fact. Occasionally it comes near to the first range. It did so in the weeks ending May 7th and June 4th, 1881, when it showed a mortality of 12·6. Why is not this possible result more frequently repeated so as to give altogether a lower average?

The question is a reasonable one, and I am quite sure that nobody wants to shirk it, because to bring Brighton permanently into group two of mortality, in which it sometimes stands exceptionally, would be to make it all but a modern Hygiopolis in health as well as in beauty.

The causes which lie in the way to prevent this result are difficult to remove. They are mainly social in character. To understand them is the first step towards reducing them.

I. The first and most important reason why Brighton does not at all times present a mortality within the first and second groups are the density and rapid growth of the population. One hundred years ago the population of Brighton was about 3320. Fifty years later, in 1831, the population had risen to 40,634, and fifty years later still—namely, in 1881, it reached 107,953. From 1781 to 1831, the increase of population was at the rate of 66 per annum. From 1871 to 1881, it was at the rate of 1344 per annum. Meanwhile there has been no commensurate increase of habitation for the resident working population. An immense number of houses have been erected for the accommodation of visitors, but until recently the houses of the industrial people have remained much the same in regard to accommodation, but often doubly and trebly crowded, floors, in fact, being practically turned into dwellings, and sometimes one or two rooms fulfilling the purpose for which the whole house was originally designed. In this way multitudes have been massed together in confined space, and, moderately free from disease so long as there was no zymotic infection amongst them, have fallen rapidly under the infliction of such infection when ripe for it and subjected to it. It was amongst these classes that the large mortality of the present year was manifested.

II. Connected with the question of population is that of occupation. In the year 1794 the inhabitants of the town were carefully enumerated preparatory to a general inoculation of the place with small-pox. There were then 5669 persons in the town, and a large majority of these were engaged either as fishermen, low town or coast men, or as agriculturists, high or upper town people, who tilled the land. Now all these conditions have changed. In 1864 I found that the fishermen were only 240 in number, and that but one professed fisherwoman was extant. The agriculturists were also very few. At this day we may consider that 6 per cent. of the population is professional; 42 per cent. engaged in domestic work, taking care, for visitors largely, of houses, hotels, and institutions; 5 per cent. commercial; 3 per cent. agricultural; 35 per cent. industrial; and 9 per cent. indefinite and non-productive. The industrial, the domestic and indefinite classes are those who make the bulk of the population, 86 per cent. of it, and they especially are the persons exposed to danger from the spreading diseases. The industrial classes are the closely confined, the badly housed, and often badly fed and clothed. The domestic classes, in order to accommodate the visitors who support them, are closely packed, and suffer great trials from their dependence on good seasons for their maintenance. To these must be added a population of visitors, who would average 10 per cent. more, and who are present for health or pleasure, or both.

III. From these commanding causes of a higher rate of mortality than are likely to occur in less crowded towns, Brighton has another disadvantage. She is a town of schools. The delicate children of well-to-do and wealthy families are sent to Brighton because they are delicate. The children of numbers of families who are not well-to-do are sent to Brighton for the same reason, under the idea, by no means incorrect, that the proceeding is to the advantage of the health of the children, and is at the same time an economy in the long run. Hence every arrangement exists in Brighton for the education of children according to

the power of the parents to meet expenses. The end, as a rule, justifies the means, and anyone who, like myself, has visited the schools and learned how many hundreds of feeble children gain good health there as well as education would rejoice to recognise the benefits realised from such a centre of educational work. But the strain on Brighton is not to be forgotten. The fact that it is made the nursery of many delicate and feeble children, because they are so, is always to be considered in relation to the normal mortality. No town can possibly attain the first place for a low mortality so long as it is subjected to this risk; and the wonder is that the school mortality of Brighton is so inconsiderable as it is in the private schools. The fact speaks volumes for the air of the place and for the skill and thoughtfulness of the heads of its educational establishments.

IV. To crowded population, to large industrial and domestic in-door population, and to school population of the kind named, must be added as a disadvantage to the health of Brighton the constant influx of persons from the metropolis and other parts of the country who are suffering from disease, or are, if not themselves suffering from disease, in some dangerous way associated with it. Other towns are, no doubt, liable to the same infliction, but none like Brighton. Brighton can accommodate forty thousand visitors, and it is known to be a place where accommodation is certain whatever may be the emergency. Brighton is so familiar to everybody, it is one of the first places thought of when change of air is considered, and the change to it is so frequently attended with benefit that its reputation is universal; indeed, it labours here again under another risk—namely, that cases of illness are very often sent there, without discrimination, at seasons when they would be better elsewhere. But the great danger to Brighton under this head is its closeness to London, and its approach to London in the matter of conveniences and habits of life. A Londoner soon becomes accustomed to certain modes of metropolitan life which are essentially of London and of no other place. To him Brighton is a suburb of London. I remarked in my report in 1864 "that the business of the town is conducted so like that of London it is only necessary for the Londoner to forget the town he is in when at Brighton to feel that he is still in London. So Brighton becomes, in fact, the sanatorium of London. In illness people who can be removed fly to it for change of air; after bereavements families goes to Brighton for change of scene, not unfrequently carrying with them particles of infection; during convalescence from acute diseases, especially from infectious diseases, the convalescents go down for a few days to complete their recovery."

V. It has occurred to several minds that as large numbers of persons come to Brighton in various stages of disease, and die there, the mortality of the town is increased from that cause alone. In order to arrive at the truth on this point I had the deaths of visitors in the town extracted from the general deaths for the five years 1877–81, together with the causes of death. The results may be epitomised as follows:—

In the five years 1877–81 the rate of mortality for the whole population, residents and visitors included, estimated on the mean of the population for that period, was 19·6 in the thousand.

In the said five years the rate of mortality in the resident population was 17·9 in the thousand.

In the said five years the rate of mortality of the non-resident population was 1·7 in the thousand.

On comparing the rate of mortality of the *resident* population in Brighton during the said period with other returns, I find that the 17·9 of that population stands to 20·1 for the united kingdom, 22·0 for London, and 24·2 for the nineteen large towns with which Brighton is classified in the Registrar-General's returns.

These facts being ascertained, it was necessary in the next place to determine the causes of the mortality of the *non-resident* population itself. Were these causes most dependent on infection or other influences connected with impurity of the air and local defects, or were they most dependent on constitutional causes under which those who succumbed were suffering before they came to Brighton?

To this question the answer is very definite.

The number of deaths amongst the non-resident population in the five years 1877-1881 was on the average 172·4 per year, of which 14·8 occurred from eight infectious diseases—namely, scarlet fever, 0·8; measles, 1·4; septicæmia, 0·6; erysipelas, 0·4; diarrhœa, 6·6; typhoid, 2; diphtheria, 0·4; whooping-cough, 2·6. There was no fatal case among the non-residents from typhus, quinsy, croup, puerperal fever, carbuncle, influenza, dysentery, ague, glanders, or hydrophobia.

The deaths from the zymotic diseases which did occur amongst the non-resident population were mainly in the poor and crowded parts of the town, as the sub-district of St. Peter's. Out of 74 such deaths in the five years 7 only occurred in the Kemp Town sub-district; 9 only in the Palace sub-district; 5 only in the Preston sub-district. In 1877-78-79 and in 1881 there was not one death from zymotic affections in the Kemp Town division; in 1881 there was not one death from them in the Palace division; in 1877-79-80 and in 1881 there was not one death from them in the Preston division. In the St. Peter's division the average was over 10 each year—viz., 53 in the five years. The mortality was, clearly, amongst the poorest visitors, amongst those who were obliged to find a temporary home in the low and densely populated parts of the town. In the favoured districts the mortality from infectious diseases amongst the visiting population was but 4 per annum.

It is necessary to mention another point which comes out of a close analysis of the so-called zymotic causes of death. We have seen that zymotic cases amongst visitors yielded, annually, a mortality of 14·8 a year from 1877 to 1881, and that they included eight kinds of zymotic disease—scarlet fever, septicæmia, erysipelas, diarrhœa, typhoid, diphtheria, whooping-cough, and measles. But when we come to the study of each of the seventy-four deaths in detail it turns out that certain of the zymotic diseases were complicated with other diseases. One of the cases of erysipelas was in a person who was suffering from disease of the heart. One of the cases of diarrhœa was in a person who was sinking from senile decay. A second case of diarrhœa was complicated with marasmus—long continued wasting; a third with colic and congestion of the brain; a fourth with chronic mesenteric disease. One of the cases called typhoid commenced with muscular rheumatism, followed by acute meningitis. These six cases were not strictly zymotic, and ought to be removed from the list, by which removal the mortality from infectious disorders would be reduced from 14·8 per annum to 13·6. Twenty-two of the deaths from diarrhœa were in children under ten months old, and were most probably instances of that common kind of diarrhœa which is induced exclusively from bad feeding, and not from contagion or infection, a reduction from the list perceptibly justifiable, and which brings down the mortality of non-residents from contagious disease to 9·2 per annum. Finally, we have to recall the certain fact that some of these fatal cases of zymotic affection amongst the non-residents were cases of persons taken into Brighton while actually suffering from, or just after suffering from, the acute disease; so that we may fairly conclude that the mortality of visitors in Brighton from infectious disease in the five years last past has been under one per thousand per annum, taking the visiting population as averaging from 9000 to 10,000.

It will be inferred from these facts that the mortality amongst the non-residents in Brighton was due mainly to causes of a general or constitutional kind, from which those who came were suffering before they came, and for which the town was in no sense responsible. The deaths thus attached to the town amounted to a fraction over 157 per annum, and by a study of their causes the inference quoted is fully sustained. The record of causes shows that the persons who died were fatally stricken when they paid their visit to the town, and many of them, without any doubt, came as a last resource to regain health. Of the diseases ending thus fatally, pulmonary consumption takes the first place; next to it is bronchitis; after that, diseases of the brain and nervous system; diseases of the heart; cancer; senile decay; disease of kidney; disease of liver; diabetes; deaths by accident; sudden deaths; and one or two by suicide.

VI. One more cause of mortality in Brighton, much less definite than the above, but still not unimportant, is included in the fact that a very large number of persons who have accumulated a moderate income retire to this favourite place late in life, become residents there, and die there. If I dared hazard anything that was speculative into a report such as this, I might state, without much risk of departure from the strict record, many very important general facts bearing upon this question. I shall venture, however, no further than convey what I feel is within the bounds of simple justice—namely, that no town in the kingdom is so

subject to residence of persons of advanced and worn-out lives; and that it is fair to assume an increase of at least 1 per 1000 to the annual mortality from this social cause alone.

SUGGESTED IMPROVEMENTS IN SANITATION IN BRIGHTON.

I come now to the last section of my report, in which I shall have to suggest such improvements as would, in my opinion, tend rapidly to bring down the mortality of Brighton to within at least the second of the groups of mortality described in the early part of the section immediately preceding.

In writing what follows I lay aside all knowledge of the possibility or impossibility of carrying out what is suggested by virtue of present legal powers vested in the Corporation. I shall suggest what seems to me essential, leaving it with the Corporation to apply for such powers as may be needed for these and other purposes, under the direction of their legal advisers.

I also lay aside all knowledge of what may or may not, for the moment, appear to be acceptable, in order to state, simply and plainly, what I, according to my best judgment, should carry out if responsible for the practical effort of making Brighton, as far as it can be made, a model health town.

1. I should as speedily as it can be done carry out the recommendation which the medical officer of health, Dr. Taaffe, reported to the Corporation on April 26th, 1877, for the improvement of the eastern portion of the town, under the clauses of the Artisans' Dwellings Act, 1875. This one improvement would, in my opinion, reduce the mortality at least 2 in the 1000 annually.

2. I should instruct the medical officer to make a similar report in respect to all parts of the town in which he detects, from time to time, an unusually high death-rate, or in which he observes that the death-rate is usually above 20 in the 1000, with a zymotic death-rate above 2·5. In all such places I should steadily endeavour to carry out the same improvements. By extending these improvements such exceptional death-rates as have occurred in the present year would be impossible.

3. I should carry out the medical officer's suggestion to establish in the eastern and western parts of the town a mortuary, so that the dead in the smaller and crowded tenements of the living may be immediately removed. Connected with these mortuaries I should build a court-room for the service of the coroner in his judicial investigations.

4. In four different parts of the town I should erect a series of workmen's workrooms, in which no family should be allowed to live, but in which any person engaged in in-door work, such as tailoring, shoemaking, and the like, should be able, under proper supervision, to hire a workroom for a small sum per week. By this means the dissemination of disease by clothes and other articles made in rooms where the sick, dying, and dead are lying would be prevented.

5. The present public baths, established some years ago on the recommendation of Mr. Councillor Wood, are performing a most important service, and, as I found on inspection, are admirably carried out, and are doing an excellent business. They are, however, altogether inadequate for the wants of the town. I should extend these fourfold at least. The temptation they offer for personal cleansing extends to cleanliness all round—in clothing, in cooking utensils, in the house, in the mind. I am quite certain that this one further improvement would reduce the annual mortality another 1 in the 1000 in Brighton.

6. In connexion with the baths I should build washhouses and public laundries. The present system of laundry work in Brighton is not so bad as it is in many towns, for, as described in a preceding page, there are two good semi-public laundries. At the Grand Hotel there is also a model laundry in which an inquirer, if he be as favoured as I was by the managers there, may see the perfection of rapid washing, drying, ironing, mangling, and folding of every variety of clothing. This would be the model of the public laundries; and if they were erected another source of danger always imminent—namely, the conveyance of the poisons of disease by infected clothing would be prevented. In each of these establishments a heat disinfecting chamber for the reception of dangerous clothing would readily find its place and would be of persistent usefulness.

7. I should second most earnestly the recommendation of Dr. Taaffe for the erection in the town, in such portions as he would know to be best, of small public lavatories and watercloset conveniences for passengers of both sexes on what is known as the châlet principle. These conveniences would be essentially healthful, and would more than pay for their own cost and maintenance.

8. The erection of model lodging-houses to replace the present common lodging-houses is another improvement I should strongly urge. I do not say that the erection of such houses would be attended with less introduction of disease of a contagious nature than has occurred in the present houses; for, bad as they are, I must be just to them and re-state that I failed to trace any disease in them or from them. But it is common sense that they, as they exist, are a source of danger, and that new houses constructed on sound modern principles would be much the best in every way, morally, socially, healthily. Moreover, such houses managed by the direct authority of the Corporation would be kept under permanent and instant inspectorship and supervision.

9. The slaughter-houses in the town to which I have referred in a previous page, call for immediate attention. These are too numerous and extend over too large an area to be under efficient daily control, and although, as I have shown, one or two of them are excellent, the greater part are anything but excellent. I should, without a moment's hesitation, remove them one and all, and carry out Dr. Taaffe's recommendation for the establishment of a public abattoir, with efficient and cleanly lairs, proper killing places, proper dressing-rooms, with lavatories, watercloseta and other necessary accommodation for the workmen, and with cold storage rooms for the storage of carcases and joints. The claims of humanity and morality, as well as of health, demand this improvement. But health demands it specially. Connected with the proposed public abattoir, which would at all times be open to the public eye, I should recommend the appointment of one or two meat inspectors, who, like the present Jewish inspectors, should see that no carcase went into the market for human food that was not free from disease. Visitors coming to Brighton would then be assured that they had there an advantage which has for so many centuries been of such important service to the Jewish people; an assurance which, alone, would be a great attraction.

10. The public markets in the town call for improvement. All of them, meat market, vegetable market, and fish market, have become too small for the requirements of the town. They should be made model places of their kind.

11. There should also be added what, I am sure, would be an immense attraction to visitors and a great encouragement to health and good taste, a special flower market, where the poor who cultivate window gardens, as well as the horticulturists, could have flower stalls.

12. I have already referred to the cowsheds in the town. They are too numerous and widespread to be under constant efficient supervision. At best it is a most unwholesome thing to coop up cows for the sole purpose of making them turn vegetable food into milk. When this is done in the midst of a human population, in improvised sheds, in wrecks of sheds, in partial darkness and unavoidable dirt, in close air, and without the provision for the instant and complete separation of the unhealthy from the healthy animals, the business becomes more than a mere nuisance. It is a source of perpetual danger to health. I should recommend the removal of all the cowsheds from the town itself, and until they can be replaced by model farm dairies, should reduce them largely in number, place them outside the town, and have them so convenient for inspection that they can be under constant surveillance. In all the milk stores I should also insist that the constant water-supply was laid on. That a reduction in mortality would follow these improvements in the town of Brighton is absolutely certain. The typhoid milk epidemic of last year is a sufficient intimation of itself on this matter. It is not in the least a sanguine view to estimate that another saving of 1 life in the 1000 annually would reward this important change in the present system, besides giving the assurance to the world at large that in Brighton, a town of schools, the young who go there would have in the purest form the most common and important food for the springtime of life.

13. I should recommend very earnestly the erection of a larger number of drinking fountains in various parts of the town. These might be made objects of artistic beauty as

well as means of health, and the outflow from them could be usefully applied for flushing purposes.

14. The great ashpit, to the working of which I paid considerable attention, is not, I think, conducive to the health and welfare of Brighton. It ought, in my opinion, to be done away with altogether, and replaced by an arrangement by which the refuse of the town would be regularly removed each day altogether from it. If it were impossible to contract with any contractor to carry out this work, then I should suggest that after daily sorting of refuse, in order to retain what was useful, the residue should each morning be put on a steam barge, carried out a few miles to sea, and buried in the sea.

I would further strongly insist on an earlier and more regular removal of the refuse of the town. I saw several times dust-carts loaded with offensive refuse parading the streets of the town when they were filled with passengers, and emptying dust from houses at the time when the butcher, baker, and other vendors of food were distributing their produce. This is most unwholesome and utterly unnecessary. The general complaint of bad smells in the town will never be removed until this reform is carried out.

Bearing on this same subject the authorities might well enforce on all householders that everyone should have a movable dust-bin, so placed that the dustman can take it up at once, empty its contents into the cart, and replace it cleanly ready for the day's use.

15. The next suggestion I have to make is, in some respects, the most important of any. In many of the private schools of Brighton great benefit has been found to attach to the possession of a separate house, into which each scholar who is seen to be ailing is conveyed, and retained until the nature of the illness is declared. By this means the spread of infection is prevented in a very efficient way. I should urge the public adoption of this plan, with special reference to those great possible centres of infection, the board and voluntary schools. A few small houses for the temporary reception and isolation of the poor children of these schools when they are falling into infectious disease, would be the wisest means for stopping those calamities which have lately caused so much public clamour, and which are so detrimental to the town, and so severe upon the suffering population. By this plan 1 in the 1000 less of mortality would each year easily be saved to Brighton.

16. I come finally to what some would think the all-important question, the drainage and removal of sewage from Brighton. It will be gathered from what I have stated two or three times already, that I do not consider the present sewerage system in Brighton responsible for the outbreaks of zymotic disease which, during the present and latter part of last year, caused the exceptional death-rates. I should, nevertheless, in order to prevent in future the suggestion of such cause, recommend certain modifications in the present system, giving to them at the same time a direction towards the separate system, and towards the ready utilisation of the sewage whenever a practical and profitable plan for so important a purpose has been discovered.

I place my suggestions under four heads :—

a. I should increase enormously the present surface ventilation. This, in my opinion, is much more efficient ventilation than shaft ventilation, and I should extend it as follows :—

I should instruct Mr. Lockwood, in at least twenty parts of the town, and in such portions as he should see best, to open a communication with the sewer between one manhole and another, each as wide as the manhole itself, and well walled in on each side. I should cover over the entire length of each opening with grating, movable at certain parts, so that the sewer men may be able to descend to the open surface of the sewer beneath. At each end of these larger openings I should have doors that would close up the space or chamber, and, when necessary, I should fill all that space with water for flushing. The town might thus be speedily and regularly flushed from a limited number of points, at which a special water service could be laid on for flushing freely and effectually by a weight of water which could be made many numbers of proportions greater than is now possible.

b. To prevent all risk of the high town ever receiving sewer air from the low town I should adapt the suggestion of Mr. Lloyd Roberts, of Denbigh, for disconnecting one district from another. I should effect this by the introduction of large traps between one district and another, just as we trap a house from a sewer, only on a proportionately larger scale. By means of the large chambers I have suggested above this separation could most readily be carried out.

c. In order to prevent the arrest of the flow of sewage in the intercepting sewer during the rising of the tide, I should utilise still further the furnace at Roedean. I should make that furnace work a steam pumping engine, the pump of which should be connected by a pipe from the Brighton side of the sewer beyond the flap which is used for shutting off the back sewer air from Portobello. I should make the engine, so soon as ever the tide began to rise, empty the sewer from the Brighton side, and pump the sewage, during the whole rising of the tide and until the fall, into the sea, by a channel provided with a series of valves, which being closed, one by one, as the tide rises, would still at the highest tide leave an escape above the water surface. In this way the intercepting sewer between Brighton and Roedean need never be locked at all, while its ventilation would be most effectively continued when the engine was in play.

d. In addition to these works the authorities should, I think, more earnestly insist than they have yet done on the importance to every householder, that he should separate his house from the sewer by an open grating; that he should most distinctly connect his house with the sewer by a good trap; that the soil pipe of his house should be freely open above the house; and that the present effete pan-closet should be replaced by the valve or syphon system.

It would, I think, also be worth while to indicate to the public the importance of catching, storing, and filtering the rain water which falls on the houses, and is now permitted to flow into the sewers. By payment of a very small rate all this soft water might be collected, purified, and applied to laundry and other purposes with the greatest advantage and economy.

In concluding this Report, Mr. Mayor and Gentlemen, I have to express my deep obligations to your learned and excellent Medical Officer of Health, Dr. Taaffe; to Mr. Lockwood; to the Resident Surgeons of the Medical Institutions, Messrs. Scott, Richardson, and Goode; to the Chairman and Secretary of the School Board; and to Mr. Hawes, the Chief Inspector of Nuisances, for the ready and efficient aid they have rendered me in my inquiries.

You requested me to report "completely and independently" on your beautiful town. I have endeavoured to the best of my ability to respond to that request, and

Have the honour to be, Mr. Mayor and Gentlemen,
Your faithful Servant,
BENJAMIN WARD RICHARDSON, M.D., F.R.S.

THE TYPHOID EPIDEMIC AT PARIS.

THE rapid extension of the epidemic of typhoid fever in Paris is exciting considerable consternation, and well may do so. The mortality has increased fivefold in the course of three weeks: from 57 in one week to 134 in the next, and 250 in the third. The number of admissions into hospital has exhibited a corresponding increase, being 213 in the first, 536 in the second, and 1001 in the third, while on Oct. 19th the various hospitals contained no less than 2136 cases. Since then a slight fall in the number of fresh cases has occurred, which, it is hoped, indicates the commencing decline in the epidemic. The epidemic is most severe in the northern quarters of Paris, the mortality at La Villette being five times as high as at Montrouge. Of the 250 deaths in the last week, 42 were between the ages of five and fifteen, and 167 were between fifteen and twenty-five. It is conjectured that the extension of the disease may be connected with the return to Paris of many families, especially students and others, who have, during a holiday spent in the country, lost some of their acclimatisation; but, on the other hand, it must be remembered that the present season of the year is that in which typhoid most frequently assumes an epidemic form. The circumstances of the outbreak, however, unquestionably deserve the most careful study, since its extent threatens to render it one of terrible proportions. It is remarkable as occurring in a season of much and persistent rain, in which the chance of the contamination of drinking-water is usually regarded as small. But the household sanitary arrangements at Paris are notoriously of the most defective description—at any rate, if judged by English standards,—and the authorities may well direct their attention to this subject. In other respects the public arrangements seem to be ill-calculated to cope with so formidable an epidemic, for we learn that but two hospitals possess an apparatus for disinfection.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 4, 1882.

WE publish this week the exhaustive Report on the Sanitary Condition of the Borough of Brighton prepared by Dr. B. W. RICHARDSON on the instruction of the Mayor and Corporation of that town. This course has suggested itself as the fairest, at once to the Corporation of Brighton and to ourselves. Dr. RICHARDSON'S Report will command attention not only in Brighton, but also in every town and health-resort in the kingdom. The author is well known to have made sanitation a special study, and we cordially commend many of his suggestions for the improvement of Brighton and other towns. We may, without vanity, take the credit of initiating his inquiry, as well as that of Sir JOSEPH BAZALGETTE. Through them much good has already been accomplished, and more must follow. By our criticisms and comments Brighton has more than once been beneficially influenced, at the same time that nearly every other health-resort in England and on the Continent has been induced to look at home and "put its house in order." We claim the right to discuss the conditions affecting the public health of any town, well knowing that by this means reforms are inaugurated, defects remedied, and abuses checked. One instance may be cited as regards Brighton.

In the year 1862 Dr. WAKLEY, the Editor of this journal, while on a visit to Brighton noticed a black mass drifting in the sea opposite the town, and on which flocks of birds were feeding. Having ascertained that this was sewage matter discharged into the sea in front of the town by three separate outfalls, Dr. WAKLEY forthwith appointed a Sanitary Commission to investigate the matter and report thereon. Their memorable report appeared in THE LANCET on Oct. 11th and 18th, 1862. It set forth the principal causes of the evil state of things, and gave diagrams of the microscopical organisms and other sewage particles collected from the sea-water immediately in front of the town. The sensation created by the publication of this report amounted almost to a panic, and at length led to an extension of the sewerage system, and the carrying of the sewage further into the sea by means of an iron pipe to a distance of one-third of a mile from the shore. This new system came into operation in the year 1864, and, bad as it was, robbed the sea of its grosser impurities, and effected some improvement in the sanitary condition of the town. With the increase of the population the evil of the plan became more and more obvious. In 1868 THE LANCET instituted another Sanitary Commission, whose report on the Drainage of Brighton appeared on Sept. 19th, 1868. Ten thousand cesspools were at that time still in operation, and though only four thousand houses were in communication with the sewers, the sea was polluted in the neighbourhood of the outlets and for a considerable distance around them. After a somewhat violent manifestation of temper the Corporation of Brighton set themselves seriously to work, and at length adopted the present sewerage system at an estimated cost of £150,000. When the new drains were completed there was much we were able to approve, though we were compelled to point out that the sewage was carried eastward and emptied *into the sea*, instead of being taken westward to some distance beyond Cliftonville, and applied, partly by gravitation and partly by pumping, *to the soil*. We also pointed out the nuisance and danger of the open ventilators. The position we took then we still maintain. We wish, however, to repeat that our attitude towards Brighton and its corporation has always been friendly. We have had no interest to serve except that of the public health. As with other towns, we have exposed some of the defects of the drainage of Brighton and have endeavoured to enforce remedies. This constitutes one of the special functions of THE LANCET, and this function we shall continue fully, freely, and fearlessly to discharge. The Corporation of Brighton have been unnecessarily and unwisely irritated at some of our strictures and have committed indiscretions in holding public indignation meetings. More recently, however,—we record it with pleasure—wiser counsels seem to have prevailed, and many of the members of the Corporation have shown a genuine desire to ameliorate the sanitary condition of the town committed to their charge. There are good reasons for believing that, when they are unfettered by their disagreement with the Hove Commissioners, they will undertake radical alterations in their system of drainage and effectually improve it. For this consummation none are more devoutly wishful than ourselves.

DR. RICHARDSON'S observations on the sewerage and drainage of Brighton, and his suggested modification of the existing arrangements, are valuable. They are also remarkable for their coincidence with the views of Mr. BAILEY-DENTON, the well-known sanitary engineer, whose opinion we sought early in the present controversy, and whose Report was published in THE LANCET on the 5th of August last. It is due to this gentleman as well as to ourselves to repeat the following words which appeared in the Report referred to:—"I do not understand that it is either the duty or the intention of THE LANCET to point out how existing evils may be removed; how, in fact, a constant flow and discharge of the sewage may be effected, and the detention of foul matters to give off sewer gases avoided; how the separation of surface waters from the sewage may be secured; or how the sewers may be economically ventilated and the escape of deleterious gases and bad smells prevented." Mr. BAILEY-DENTON did, however, venture to point out that the authorities of Brighton and Hove might secure a constant discharge by the application of steam power to lift the outflow when it was impounded by the rise of the tide, observing that that desideratum could be effected by supplementing the furnace arrangements at Roedean with the necessary engine power. Dr. RICHARDSON proposes precisely the same thing when he suggests "the further utilisation of the furnace at Roedean by making it work a pumping engine for raising the sewage on the Brighton side during the period of the rising of the tide." At Brighton, where the intercepting sewer forms at each tide an enormous cesspool at the foot of the principal residential portions of Brighton and Hove, it really becomes a *sine qua non*, if the present evils are to be removed, that the constant outflow of sewage in-

dependent of tidal influences should be secured. There is no other town in England resorted to for health and pleasure where the same length of tide-locked sewer, subject to the sudden influx of storm waters, occupies a position so prejudicial to sanitary economy.

Upon the advantage of separating surface waters from sewage Dr. RICHARDSON and Mr. BAILEY-DENTON also agree. The doctor states: "I have been a consistent advocate of the separate system of drainage and sewerage all through my career,"—that the sewage from the houses should have "a perfect flow at all times, to ensure its delivery to whatever may be its ultimate destination," and "that the rain or storm water should be separately disposed of," adding that "in Brighton *this system is not carried out.*" This negative statement of Dr. RICHARDSON'S is expressed by Mr. BAILEY-DENTON in these words: "The whole of the rainfall from the surface is admitted into the sewers and mixes with the sewage," the effect of which, he adds, is that when any large quantity of sewage has accumulated in the outfall sewer, when tide-locked, a sudden influx of rainfall necessarily expels the air still remaining in it and drives it by untrapped branch sewers or through faulty traps into dwellings.

Upon the question of leakage, Mr. BAILEY-DENTON gives figures showing that the quantity of diluted sewage collected during dry weather in the intercepting sewer each tide alone—i.e., in twelve hours—amounts to more than the whole daily water-supply—i.e., of twenty-four hours—of Brighton and Hove, an estimate which if only approximately correct, distinctly proves the influx of subsoil water. Yet Dr. RICHARDSON says the intercepting sewer is "well built, and cannot," *he thinks*, "permit leakage." As this point is much more important than appears at first sight—inasmuch as the collection of subsoil water in the sewer lessens the space for surface water—we recommend that the Brighton Town Council should refer the question to some independent engineer.

Dr. RICHARDSON presses upon the Council an increase of surface ventilation and the disconnexion, by traps, of the sewers of the higher portions of the town from the lower, in the same way as all dwellings should be disconnected from common sewers. As regards the first of these objects sanitarians appear to be agreed that ventilation ought to be increased rather than diminished wherever it can be done without positive nuisance, and so long as the present system of things exist at Brighton increased ventilation in some shape or other must be adopted. No mode of ventilating or trapping of sewers, however, will be safe so long as the mouth of the outfall sewer is closed for thirteen hours out of every twenty-four, and the outfall sewer itself is subject to sudden influxes of storm waters; or so long as the houses in the town, to use a technical phrase, are not thoroughly "*disconnected* from the public sewers."

THIS is, in a special sense, the epoch of restraints, denials, and abstinences in the discipline of self and the policy of domestic life. Such progress as we are making is marked by a more or less philosophic abandonment of pursuits, pleasures, and habits, and the disuse of certain drinks, foods, and creature comforts which are, or are supposed to be, needless or harmful. It is impossible not to feel proud of the self-denying spirit that pervades society and the community at large, especially in the British isles, albeit, as KANT has most conclusively demonstrated, no genuine self-denial is practicable because the dominant desire or impulse at the moment of seeming to deny self is one of self-sacrifice. In a moral and mental way it is obviously possible to debilitate, instead of strengthening, the will by too much "swearing off" and protesting. It is expedient that a suggestion of this danger should be allowed to mingle with the counsels in favour of abstinences, which are just now so fashionable, and of which many "authorities" are perhaps a little too lavish. Abstinence from the use of tobacco is one of the forms of abstaining which are being pressed on the public with the energy of an active and full-blown fanaticism. We do not share the strong prejudice which finds its expression in this new counterblast. We have condemned, and shall continue to denounce, the abuse of tobacco, by its excessive, untimely, or inappropriate use. Many smokers smoke too much and take in too much of the smoke they make, others abuse tobacco by using it at wrong times and seasons, while to a third class, comprising the young and persons with special susceptibilities, tobacco is injurious in any form or quantity, and at all times, because, owing to the stage of development or some idiosyncrasy of the organism, the nicotine—which it is *impossible* to prevent passing off with the smoke—is in all doses hurtful and even poisonous. We cannot, however, join in the outcry against tobacco in its moderate and appropriate use. Our reasons for maintaining this position in a controversy, which would seem to be recurrent, will be most readily made evident by a short review of the physiological effects of tobacco, as that commodity is known to the smoker.

It is needless to summarise the properties which have been and still are attributed to tobacco in the text books. These are perfectly well known to the profession and have been repeatedly popularised for the public. It is with the vegetable product burnt in pipes, in the form of cigars or cigarettes, we have to deal. Practically this may be described as the dried leaves of the plant, either finely shredded or rolled nearly intact, in the former case burning very rapidly, in the latter being reduced to ashes perhaps somewhat less speedily, but with little delay. When tobacco is burnt in a clean pipe perhaps half the total quantity of the smoke given off is taken into the smoker's mouth. If an unclean pipe be used the same quantity of smoke is taken, but in the act of passing from bowl to stem the smoke probably takes up some of the old oil which has accumulated in the pipe. In the case of a cigar the smoke derived from the burning extremity of the roll of leaves is drawn between the layers of the latter with the result that probably a cigar is equivalent to a clean pipe until it has been burnt to the extent of two-thirds of its length, when it must be considered in the light of an often-used or foul pipe, because the heat and friction of the smoke have caused even the proximal portion of the burning leaves to begin to give off their oil. A cigarette is to all appearance, and perhaps, in fact generally speaking, a particularly mild form of pipe; but it must be remembered that the tobacco in a cigarette being very finely shredded and only loosely pressed together, burns more rapidly than the tobacco in the bowl of a well-loaded pipe, and that it is placed much nearer the mouth than in any pipe, except it

be the very short one used by navvies. It is therefore likely to happen that the habitual and almost continuous smoker of cigarettes—the man who seldom has one out of his mouth except at meals, and even then can scarcely refrain from a whiff—may in the course of the day consume a very large quantity of tobacco without perhaps being conscious of excess. The form of the "smoke" has, therefore, evidently a bearing on the amount of tobacco consumed. The mode of taking in the smoke is also important. Some smokers simply take the smoke between their lips, and, scarcely allowing it to enter the mouth, blow it out again; while others hold the smoke in the mouth, even carrying it back to the fauces, and occasionally ejecting it through the nose. The smoker who draws the greatest amount of smoke and keeps it longest in contact with the lining membrane ofthe air-passages undoubtedly takes the largest dose of the oil.

There are three points to consider—first, the local effects of the oily vapour from the burning leaves; second, the immediately contingent effects of the tobacco; and, third, its remote, or secondary effects. Each of these would call for special study in an exhaustive investigation of the subject. We cannot, on the present occasion, do more than suggest the line of inquiry to be pursued. As regards the local effects, it is especially desirable to be observant. There can be no question that the influence exerted on the mucous membrane of the lips, mouth, tongue, palate, epiglottis, larynx, and fauces, by smoking is important. There is first dryness, then hyperæmia of the membrane itself, next comes excitation of the nervous filaments distributed throughout the region, with direct irritation of the centres, and reflex stimulation of the glands. In consequence of this last mentioned set of effects, we get either increased secretion or very prompt emptying of the salivary glands, and either waste of the saliva, or the passage of that fluid into the stomach—probably at the time empty. The saliva is, moreover, to some extent impregnated with the oil derived from the smoke of the tobacco. It is easy to see how local disturbances, such as epithelial growths, innocuous or malignant indurations, and the like, may be induced by smoking; how the nervous centres connected with the various nerves distributed to the mouth, tongue, and fauces may be affected, how the salivary glands may be over-stimulated and exhausted, and how the stomach may be disordered. The passage of salivary fluid into an empty stomach may help to appease the appetite, but it can scarcely improve the digestion. Other local effects might be mentioned, but they will suggest themselves. Next come the immediately contingent effects of smoking. These may be either stimulating, sedative, or toxic, as the quantity of the nicotine actually introduced to the system—a very difficult point to settle—varies or the idiosyncrasy of the smoker may determine. The sum of the investigations that have been made in connexion with this phase of the subject would seem to show that nothing short of direct experiment in any particular case can supply the requisite data for determining how the smoking of tobacco is likely to affect an individual. And the deduction which may be hastily drawn from a few experiments will need to be qualified by the further consideration that the susceptibility of the organism for the influence of tobacco-smoking varies in a very special degree with those changes of state to which all systems, and specially those of the class of persons who require or desire the use of tobacco, are subject. One man can smoke with the best results when he is hot, another when he is cold; one needs to have a full stomach, while another enjoys his smoke most in the early morning, or when he is hungry; one will take his pipe or cigar when he has to think, another must be idle to profit by it; and so on. With every change of mind, nerve-state, and condition of health, the susceptibility to tobacco varies. It is useless to try to lay down any precise law as regards its action. The use of the "weed" is in every case experimental, and its immediately contingent effects are incapable of prediction. As a rule, however, we believe they are, in the moderate use of tobacco, according to the individual taste, good instead of evil; but the patient, rather than the doctor, is the judge of results, and it is policy on the part of the latter to refrain from dogmatising on the subject in any special case. The remote or secondary effects of tobacco-smoking are certainly not *cumulative*. There is not a particle of evidence which can be legitimately pressed into the service of the assumption—sometimes recklessly and unscientifically made—that they are so. A man may exhaust the strength of his nervous system and thus lower its tone, or he may impair his digestion, by habitual excess in smoking, but these results are in no sense cumulative, nor has the agent by which they have been produced been cumulative in its energy. The disastrous effects of tobacco-smoking—when too much is smoked or the tobacco is too strong—are those of persistency in the use of an injurious article, not a piling up of its effects. This is especially indicated by the state of the pulse in habitual smokers to excess. The sphygmograph shows a depressed state of the vessels while the smoking continues, and for a short time after a pipe, but the effect generally passes off when the use of the drug is abandoned for a few hours. So with the disturbance of digestion produced by excess in tobacco-smoking, and with its other "evil consequences," which have been much exaggerated.

There is very little, if anything, to be said against the moderate use of tobacco in an average state of the organism. Those who are unfavourably affected by it should abstain, and it is wholly inadmissible in youth. We would go so far as to say that no young man should smoke before he has attained his majority, and it would be well if he deferred the use of tobacco altogether and in every form, until the extreme limit of development, which may be placed at the age of twenty-six. It is impossible to give any precept as to the time and mode of smoking. Personal sensibilities differ so widely that no common premiss can be laid down. Speaking generally, the points of caution should be to avoid—irritation of the mucous membrane of the mouth and fauces, loss of the salivary secretion, and super-excitement of the nerves and nerve-centres. Cigars are better than pipes, and far better than cigarettes; but no cigar should be smoked for more than three-fourths of its length, even with a mouth-piece. The smoke should be taken into the front of the mouth and ejected as rapidly as possible. Properly and moderately employed, tobacco-smoking is not a baneful habit, but one that may be reasonably enjoyed.

IT is remarkable that two of the London Medical Societies have already discussed the value of operations for cancerous disease of the mouth. At the first meeting of the Clinical

Society Mr. GOLDING BIRD and Mr. CLEMENT LUCAS related cases of malignant disease of the tonsil and neighbouring parts, for which they had performed severe operations aiming at the entire removal of the diseased tissues. These cases afforded evidence of the boldness and skill of the operators, but will hardly encourage other surgeons to adopt a similar line of practice. At the Medical Society of London Mr. BRYANT and Mr. JONATHAN HUTCHINSON have spoken of the excellent results they have obtained in many cases of excision of the organ for cancerous disease, and expressed their conviction that the general estimate of the value of this procedure would have to undergo a considerable change, as the facts of more recent experience become fully known. It is very encouraging to hear two such trustworthy surgeons speak of patients being altogether free from recurrence of the disease for periods to be measured by years rather than months, and it is impossible to doubt that in such cases the operation has been eminently successful in prolonging life. In many of these cases the disease ultimately recurred, not in the mouth, but in the lymphatic glands, where it is not attended by the many distressing symptoms that render cancer of the tongue so particularly painful. And in this fact we can trace another distinct advantage from the operation. This fact, however, suggests important questions. Can it be that the disease which becomes obvious in lymphatic glands many months after the removal of the primary growth has actually *started afresh* in the glands? Or is it that some minute infected focus of the gland has remained quiescent for all that time, and then after a long interval has taken on its malignant activity? The prevailing belief is that these growths in the lymphatic glands are infective in their nature and truly secondary. And the mass of evidence in favour of this view is so great that it is almost impossible to reject it, although such cases as those alluded to by Mr. BRYANT require the supposition of a long period of latency in the infected glands. If this be so, the subject to which Mr. PEARCE GOULD has drawn attention, of the desirability of removing the lymphatic glands which receive their lymph directly from cancerous tissues, at the same time as the primary growth is excised, even although they show at the time no obvious signs of being affected, acquires great practical importance. It is impossible to avoid the question, Would these cases of Mr. BRYANT'S have been freed from cancer altogether if at the time of his operation he had removed the glands which ultimately became the obvious seats of the disease? Those who, like Mr. BRYANT, hold that cancer is at first a purely local affection, only defend operations when by them the entire local disease is removed.

At the Clinical Society Mr. HEATH and others spoke of the wisdom of removing cancerous glands. How much better might the results be expected to be if the glands were removed when they contain only the earliest germs of the disease, or possibly are quite healthy. It has been clearly established that a successful operation will often remove the primary affection, and the patient live for years without local recurrence, the operation failing only in preventing a secondary growth in the glands. But there is nothing in the nature of cancer of lymphatic glands by which it differs from primary cancer that should make surgeons look less hopefully upon early operations on one than on the other. Moreover, while glands can often be removed before the disease has become advanced in them, they mostly lie quite superficial and readily accessible, and their excision is not an operation of great danger. In this direction, then, we may fairly look for further success in the operative treatment of cancer.

There is, however, another point of view from which these cases become of great interest. They are analogous to cases in which there is a true *local* recurrence of the cancerous affection long after an operation. In each alike some disease-germ is believed to be left behind, which after a period of latency suddenly or gradually—and often very rapidly—takes on active growth. This is the theory of the "localists," unless they assert that a new fresh growth of cancer arises under the influence of the same local causes as induced the first. Is this period of latency due to some unfavourable constitutional condition, or is it a peculiarity of the local growth? We meet with cases illustrating all possible grades of rapidity of recurrence. After operations apparently equally complete and thorough, in some the disease reappears before the wound is healed, in others the recurrence is noticed after weeks only, in others after months, and in yet others after years. Is this variability due to local or constitutional causes? In other words, is cancer the *purely local* disease that it is often asserted to be? Without attempting to give a definite answer to this question, we must also ask whether there is any sure way of telling whether any given cancer will recur rapidly or tardily after its removal. The answer to this question depends upon the answer to the former one, and yet possibly this order will be inverted. For surgeons of large experience in these cases may be able to observe signs by which they can foresee a rapid or a delayed recurrence of a cancer, and by which, according to the character of those signs, they may be able to decide as to the purely local or partly constitutional nature of this malignant disease. An answer to this question would be of great service; for while many cases in which operation has been attended with success can be adduced, there are many others in which the result has been disappointing and grievous in the extreme; in which not only has the operation failed to do good, but in which it has, if possible, aggravated the patient's condition; in other cases, again, life has been subjected to serious peril with a minimum of benefit. Happily, in a large proportion of cases of cancer—when it attacks the breast, scrotum, lip or anterior part of the tongue—its removal is not attended with grave danger, and the risk to the patient's life is not such as to weigh for much either for or against operation. But in other situations—the rectum and the pharynx—the success of an operation for the removal of the disease is largely dependent upon the skill of the operator, and is necessarily attended with considerable danger to life. The question of how far it is justifiable to expose a patient to this risk when the most that can be hoped for is but a brief respite, is one that deserves the most careful consideration of surgeons, and a knowledge of any peculiarities in either the individual or the cancerous growth, which may be taken as signs of very slow recurrence, would here be of great value.

THE tendency to magnify the value of peculiar cases in medical teaching is one which, when carried to excess, is damaging to the interests of the ordinary student; and

nowadays, chiefly from a fear of appearing trivial by offering the simpler details of medical work, teachers and authors alike show a pleasure in dealing with the cope-stones of medical or surgical knowledge before they are assured that the foundations are securely laid. Whether we consult the regular text-books, special monographs, or the lectures of clinical teachers, a disproportionate amount of space will be found devoted to a record of cases valuable as much for their rarity, or perhaps as evidence of the brilliant results of treatment, as on account of their instructive worth to the reader. To the student or young practitioner these are but sorry guides in the labyrinth he is bound to tread; but, in reality, the evil is much in the nature of things, as the literature which deals with the ordinary diseases of ordinary people is apt to be voted trivial and dull, each one believing himself to be acquainted with such equally with his would-be instructor. And yet it is not unlikely that treatment is frequently based on an instinctive or rough application of general laws, with but little thought or modification for particular cases. It may be safe to tell the exact and well-informed practitioner to treat on general principles, and possibly the work in which little detailed attention is given to treatment may be useful to such; but for the average man more than this is required, and, left to himself, it is just possible that his patients may suffer while he gropes about attempting to find a safe course. In general practice, so much is needed in the way of attention to detail, such a constant necessity to adapt the treatment to the varying aspects of the disease, and we are so frequently consulted regarding points which, if too trivial to mention in print, are so difficult to deal with in practice, that a full exposition of these would often prove of inestimable advantage to the practitioner, especially to one of little experience. The same over-elaboration of unusual cases is noticeable in the teaching at our various hospitals and schools, as is evidenced by the large share of attention given to work in the wards as contrasted with that bestowed on out-door patients, even though the latter suffer from the diseases which in after-life the family physician will most commonly be called upon to treat. An obscure, rare, or sensational case is looked upon as a godsend to a ward, and students are called upon to devote a large portion of their time to the observation of diseases which they are not likely to find in their after-experience, and which, if found, they immediately hand over to the care of the special or hospital physician or surgeon. Were it possible that the whole of medical knowledge could be obtained or assimilated during the too brief period of study, such study would form a necessary part of hospital work, but under present circumstances this time is largely wasted in casual glimpses at imperfectly understood phenomena. The whole natural history of diseases, such as aortic aneurism or mephitic abscess, requiring perhaps surgical interference which they will feel unequal to, is known to many students who have no intelligent conception of the various forms of dropsy, who have perhaps had no opportunity afforded of following throughout a typical case of scarlet or typhoid fever, and who would feel extremely nervous if suddenly called upon to amputate a finger or satisfactorily introduce a Hodge's pessary. Of the chameleon-like phases of dyspepsia they know little, but are perfectly acquainted with the modern operation of gastrotomy. Leaders and experts in the profession must necessarily devote both study and daring in pushing forward the limits of our knowledge, and without such men it is needless to say that our present proud position could not have been gained. Specially rare and interesting cases must continue to occupy a large portion of professional and more especially periodic literature, and in later periods of study all intelligent men will interest themselves in such; but the fuller consideration of the more common and happily less serious ailments, both in our text-books and our hospitals, would be an incalculable boon to the general practitioner suddenly required to meet all the emergencies of ordinary practice, and to depend solely on his own resources.

Annotations.

"Ne quid nimis."

THE ARMY MEDICAL SERVICE IN EGYPT.

THE apathy and indifference with which the claims of the medical officers to a fair share of the rewards bestowed for service in the field have hitherto been too generally treated, and the grudging recognition which has been accorded them, has been the subject of comment after almost every war. But when a question of supposed neglect of duty, of inefficient arrangements, or inadequate preparation for the contingencies of a campaign is started, there is an immediate change of scene: apathy is replaced by fervid zeal, and there is no lack of persons eager to take part in the attack upon the doctors. Of this not very chivalrous course we have again had an instance in the Egyptian campaign. When a vote of thanks for the great services performed by the army and navy was moved in Parliament no one had a word to say regarding the omission of the medical officers, though the head of that branch was of sufficient rank to have entitled him, had he been one of the lucky combatants, to have been included among the officers named in the vote. But when the subject of an alleged breakdown was brought forward there was no want of honourable members to put questions which implied at least a belief in the charges against the department, many of which had already been proved to be groundless. The same thing occurred after the Zulu war, questions having been put which Colonel Stanley characterised as the "unfounded, he had almost said the foul, aspersion." Mr. Childers, on Monday last, repeated the information he had previously given that he had appointed a committee to inquire into the allegations which have been made as to the inefficiency of the service, and he defended the composition of the committee as a "strong one calculated to act fairly to all concerned." He has since then added to it the name of Sir R. Lloyd Lindsay. In reply to subsequent questions on the subject he stated that while he would not pledge himself to lay on the table the report of the committee and the evidence taken before it, he could not see any reason to the contrary, and as at present advised it would be done. The form in which the question was put by Mr. Carington, coupled with a remark of Mr. Childers "that strong pressure from different directions had been put upon himself," appears to bear out the opinion we recently expressed that these charges against the medical officers seemed to be brought mainly with a view to discredit the present organisation of the department. We are satisfied to take Mr. Childers' description of the committee, which we believe will make a thorough, honest, and searching investigation into the working of the medical service. That

individual instances of shortcoming may be found we can readily believe, but we have full confidence that the result will be to show that the medical officers as a body did their work fearlessly, skilfully, and zealously, and that any deficiencies in the medical arrangements of the late campaign were the result of circumstances which, so far as the department was concerned, could not have been foreseen and which it was quite out of its power to control.

SEWER GAS AND ITS DANGERS.

THE injurious effects produced by the escape into dwelling-houses of emanations from sewers have been so thoroughly ascertained and are so generally admitted, that probably no one would venture directly to deny them. Nevertheless, we often see in practice arrangements accepted in the drainage both of separate houses and of districts which must necessarily lead to evil results, showing that the danger, if not formally denied, is often regarded as of little moment. It is still sometimes asserted that sewer gas in itself is incapable of doing any harm. It is therefore necessary from time to time to point out to the public the real nature of the danger which is thus incurred. In the first place, there are in the emanations from sewers the chemical products of the decomposition of animal matters, as sulphuretted hydrogen, ammonia, &c., to which the offensive smell is due. Now, these gases in themselves, though disagreeable and doubtless prejudicial to the health, are incapable unless highly concentrated, when they act as rapid poisons, of causing serious disease, and when diluted are chiefly important as indicating the fact of sewage emanation, and consequently the presence of the really injurious elements, which are themselves inodorous and imperceptible to our senses. These elements are probably the microzymes which germinate in sewage, especially when pent up and stagnating. These microzymes are of various kinds and properties. Firstly, the microzymes of putrefaction and the septic processes, which differ greatly in their virulence according to the conditions under which they are generated. To these may be ascribed the low sore-throat, the diarrhœa, and the many non-specific diseases which sewage emanations so often give rise to. The presence of these germs will also often convert any simple inflammation into a spreading or erysipelatous one. Next, in sewage gases the microzymes of various specific diseases, especially typhoid fever and diphtheria, are liable to occur. These, no doubt, are not always present, and we often see instances of prolonged sewage contamination both of the air and drinking-water of houses without these affections showing themselves; then, perhaps, the poison gets introduced and an outbreak takes place. But there is probably no town of any magnitude in England, and certainly no health-resort frequented by convalescents, where these poisons are not certain, sooner or later, to be introduced; and, given the conditions necessary for their germination and dissemination, we shall find these diseases endemic with occasional epidemic outbreaks. The conditions which especially favour the development of these poisons are stagnation of sewage and want of free ventilation; indeed, many high authorities believe, as did the late Dr. Murchison, that under these conditions the poison of typhoid fever may be generated *de novo;* and recent researches on the microzymes of disease would give support to this view, as they show that these organisms are capable of being extraordinarily modified by the conditions under which they germinate, so that it is possible to conceive that microzymes generally harmless may, under favouring circumstances, develop into the germs of specific disease. Any system of drainage which causes the sewage to stagnate, or be pent up for however short a time, or under which the sewage gas is liable to be forced back into the houses, must be regarded as essentially faulty, and tolerably sure, sooner or later, to give rise to the most injurious consequences.

SUPRA-CLAVICULAR PSEUDO-LIPOMA.

A FEW months ago M. Verneuil described, in the *Gazette Hebdomadaire*, an affection to which he gave the above name. It is characterised by a swelling in the supra-clavicular region, which transforms the usual depression to a prominence, two or three centimetres above the level of the adjacent parts. It occupies the space left free between the clavicle, the sterno-mastoid, and the trapezius. The swelling is elastic, not tender, nor is there any change in the colour of the skin. The subject has been lately studied by M. Potain, who has read a paper on it in support of his candidature to a place in the Académie de Médecine. He has observed twenty instances of this condition during the last three years, and confirms Verneuil's description, pointing out, however, that a slight prominence in this situation is common in stout persons, and may be regarded as physiological. Four of the cases were men, and sixteen women; almost all, like those of Verneuil, were rheumatic subjects, and presented unmistakable manifestations of their diathesis in vague pains about the joints and muscles, and not infrequently evidence of slight arthritic changes, amounting in the majority to distinct painful swelling of many joints, especially the knees, wrists, fingers, and tibio-tarsal articulation. The urine in many cases presented deposits of uric acid. Three of the patients were diabetic, and all had a fair amount of subcutaneous fat. In some cases the swelling exceeded the limits mentioned above, and similar swellings are sometimes met with in other situations, at the sides of the patellar tendon and of the tendo Achillis, in the neighbourhood of the malleoli, less commonly below the occipital bone, in the temporal, parotid, and submaxillary regions—in short, in various situations in which the loose cellular tissue, which habitually contains a good deal of fat, is susceptible of the deposit of an excessive quantity of fat or of serosity. A similar condition is sometimes seen in slighter degree at the backs of the hands. Distinct œdema of the cellular tissue is often associated with these pseudo-lipomata without the coexistence of any of the usual causes of œdema. It was present in eight of the cases, and is often to be found, M. Potain believes, in cases of the rheumatic diathesis, whether the more definite rheumatic symptoms be acute, subacute, or chronic. He suggests that both the œdema and the overgrowth of fat are the result of the same morbid tendency.

CANADIAN AND AMERICAN HOTELS.

IT is time the travelling public were warned of the dangers attending a lengthened stay in an American or a Canadian hotel. With few exceptions, these hotels have fixed wash-basins, with hot and cold water laid on, in the majority of the bedrooms, and very frequently a bath and other convenience in addition. In the private houses of wealthy Americans, who are favourable to luxurious living, this same system is almost universal. An examination of many of these basins and of the plumbing arrangements has brought to light the fact that they are frequently untrapped, and that when traps are used, they are of a bad pattern, and calculated to create danger to the health of the occupant of any room or house where they are placed. A few weeks ago, a correspondent of THE LANCET was placed in a bedroom where there was a fixed basin which communicated directly with the sewer without any intervening trap. He was made seriously ill by sleeping one night in this room with the windows wide open; and although he placed the plug in the basin and filled it with water, the whole of the water was sucked out through the waste-pipe during the night, and the

room filled with sewer gas. At the end of September another visitor was equally poisoned, and he found the waiters in the dining-room engaged in making a careful search for an escape of sewer gas, which was painfully apparent in that apartment. Remonstrance at the office of the hotel elicited the remark from the clerk in charge that he feared the sewage must have bubbled over again, but he was unaware that the basin was untrapped. Inquiry showed it was the common report that in some cases the sewage had forced its way into the basins in the bedrooms. It is not too much to say that it is dangerous for any adult to reside in an hotel with such imperfect sanitary arrangements, and that the air of the room would not improbably cause death to a delicate child. In very many hotels in America and Canada bottle or cesspool traps are used under the basins, in which the sewage ferments, and so sewer gas is liable to be generated in every room which has a fixed basin. We must warn travellers to be careful before retiring to bed or remaining for any length of time in an hotel where the arrangements are as we have described. It would be a public service for one of our contemporaries in America to fearlessly expose this great danger to the public health.

EGYPT AND THE MECCA PILGRIMAGE.

THE Egyptian campaign, by reducing the number of pilgrims to Mecca, would, we anticipated, have the advantage of lessening the probabilities of an epidemic. Indeed, this consideration more than compensated the slight risk of cholera involved by the importation of Indian troops into Egypt, which so much alarmed our French neighbours, that, under the direction of Dr. Fauvel, Inspector-General of the Sanitary Services of France, official remonstrance was addressed to the English Government. The early termination, however, of the campaign has enabled a far larger concourse of Egyptian pilgrims to gather round the sacred shrine; and though as yet no epidemic has broken out, we cannot but feel that while our troops are still in Egypt, the risk is to us a matter of great concern. The sanitary services must have been considerably disturbed by the war. Will they be satisfactorily re-organised before the return of the pilgrims? The pre-occupations arising from military and political matters must not be allowed to take precedence over these all-important health questions. Our neighbours, in any case, are fully alive to the danger. Cholera in Egypt, it is felt, would mean an epidemic spreading throughout the entire basin of the Mediterranean. From all sides we receive protests and warnings. Dr. Bradel, of Bulgaria, writes that he is alarmed because the 5000 or 6000 Turks living in Bulgaria still send pilgrims to Mecca, who return *viâ* Varna in a filthy condition, with boxes containing clothes which have become so foul during the journey that last year no one could be persuaded to open or to move them. Professor Felix, of Bucharest, has been urging the Austro-Hungarian Government to appoint a permanent scientific commission, while Dr. de Csatary, of Buda-Pest, is agitating in favour of an international convention between all nations who have equal laws relating to public health. As, however, we are not acquainted with any two nations that have equal laws on such a subject, it would obviously be most disastrous if countries like England, which have gone far in advance of other European nations in sanitary legislation, should be brought back to their low level. But when Dr. Csatary further proposes that the contracting nations should abolish all impediments to free intercommunication and commerce, he shows himself more in harmony with the feelings and interests of the age in which we live. To these somewhat elaborate schemes Dr. Raymondaud, of Limoges, adds a more practical suggestion. He proposes to organise an ambulance service in a manner similar to that of the Red Cross Society, but whose mission it would be to follow in the wake not of wars, but of epidemics. Finally, Dr. F. Ovilo, of the Spanish army, and late medical officer to the Sanitary Council of Morocco, has published a pamphlet insisting that in Morocco everything existed that could favour the development of disease, especially cholera. This state of affairs is a perpetual menace to Europe, and cholera in Egypt would become infinitely more dangerous by the prospect of its spreading to Morocco. He therefore maintains that the European powers should bring special pressure to bear against Morocco, and establish a sanitary bureau in that country, with power to act independently of the local native authorities. Further, it is urged that no ship should be allowed to convey the "Hadjis" from Mecca to Morocco without undergoing the strictest sanitary supervision. Altogether, therefore, if mischief results from this year's pilgrimage, it will not be for want of warning; but we trust we shall add to the triumphs already achieved in Egypt that of successfully protecting Europe against the danger now causing so much anxiety.

THE PARKES MUSEUM.

THE first general meeting of the Parkes Museum was held, in accordance with the Act of Incorporation, at the new premises in Margaret-street, W., on October 28th, at 3.15 P.M. Among those present we noticed T. Twining, Esq., George Godwin, F.R.S., Professor De Chaumont, Captain Douglas Galton, Dr. W. Wood, Professor John Marshall, Miss Davenport Hill, L.S.B., Professor Corfield, and many others interested in sanitary progress. The Secretary, Mr. Judge, having read the notice convening the meeting, it was proposed by Mr. Twining and seconded by Mr. Geo. Godwin that H.R.H. Prince Leopold, Duke of Albany, be elected President of the Museum. This having been carried *nem. con.*, the following were unanimously elected Vice-Presidents: The Duke of Northumberland, the Duke of Westminster, K.G., the Earl of Derby, K.G., Earl Fortescue, the Right Hon. Sir R. A. Cross, G.C.B., the Baroness Burdett-Coutts, Sir Joseph Fayrer, K.C.S.I., Edwin Chadwick, Esq., C.B., Professor T. H. Huxley, Professor John Tyndall, R. Rawlinson, Esq., C.B., and Miss Florence Nightingale. The following were then elected to form the first Council of the institution: Captain Douglas Galton (Chairman), Dr. Poore (Vice-Chairman), Mr. Charles Parkes, Mr. A. Waterhouse, A.R.A., Mr. Twining, Mr. Rogers Field, C.E., Mr. E. C. Robins, F.R.I.B.A., Professor Hayter Lewis, Professor Corfield, Mr. Geo. Godwin, F.R.S., Professor John Marshall, F.R.S., Dr. Sieveking, Dr. Russell Reynolds, F.R.S., Dr. Steele (Guy's Hospital), Dr. Gowers, Mr. Berkeley Hill (Treasurer), and Dr. Dawson Williams (Hon. Secretary). A vote of thanks to the Chairman was next proposed by Professor De Chaumont, and Captain Galton, in responding, reminded his audience that the Parkes Museum had now entered upon a new phase of existence; it had reached an independent position, and for the first time had a building of its own, to which all who desired to use it either for purposes of teaching or learning would be welcome. They commenced their new life under the special protection of a distinguished member of the Royal Family, and with the co-operation of twelve Vice-Presidents, each of whom was well known for his philanthropic or scientific labours. They had every reason to believe that the Museum would meet a great public want, and that the assistance of the public and of the scientific professions would not be withheld from it. The Council would endeavour to make their new home as nearly perfect, hygienically, as possible. The drainage arrangements had been carefully planned by Professor Corfield and Mr. Rogers Field, and it was intended that they should be so constructed as to be available for teaching purposes. He was pleased to

announce that Mr. Rogers Field had made the handsome offer not only to supervise the construction of these arrangements, but also to bear the whole expense of them. The lighting, warming, and ventilating of the Museum were being carefully considered by a special committee, and every endeavour would be made to make each of these arrangements a model worthy of imitation. Their friend Mr. Twining, to whom the Museum was deeply indebted, had undertaken at his own cost the supervision and arrangement of the food collection. The whole collection would be carefully weeded and rearranged, and it was hoped that the active work of the Museum would begin again soon after Christmas. These remarks brought the proceedings to a close.

THE LATE MR. ARTHUR, M.B.

MR. JOHN FINDLAY ARTHUR, M.B., C.M., of Aberdeen University, whose melancholy death has aroused the sympathy of the whole country, was a son of the Rev. D. F. Arthur, minister of the Free Church at Banchory-Devenick, near Aberdeen, and graduated in 1873. Leaving St. Pancras, London, by the 9.15 P.M. train on Saturday, he occupied a berth in the rearmost part of a Pullman car, and all went well till after leaving Normanton. After leaving this station, and while the train was proceeding at a very rapid rate, the cry of fire was raised by the attendant, who, along with other three occupants, rushed madly about the carriage, and endeavoured to communicate with the driver. It does not appear that Mr. Arthur ever left his berth, and it is only certain that when the train was ultimately brought to a stand and the flames extinguished the unfortunate gentleman was found dead, and the body fearfully charred and almost unrecognisable. It is not decided whether the fire was occasioned by the overheating of the stove, or by a spark from the cigar of Mr. Arthur himself. His brother, who is in practice at Cults, near Aberdeen, had received a telegram, asking him to meet Mr. Arthur at Aberdeen station on Sunday, and the shock to the family on receipt of the sad intelligence was very great indeed. Both as a student, and among those who knew him since, Mr. Arthur was much admired for his genial disposition, his high talents, and commanding appearance, being a man of fine physique. As a student he distinguished himself in several classes, and after graduating he proceeded to Ceylon, where he received a Government appointment as district medical officer at Dimboola, and soon gained for himself an excellent position. About two years ago, while riding to attend a patient in a distant part of his district, he met with an accident which necessitated his coming home for professional advice, but after seeing some friends in Aberdeen, he returned to Ceylon for a short time, and five weeks ago left there again for home. Mr. Arthur, who was about thirty-three years of age, has two brothers who graduated at Aberdeen in 1880: one is in practice as above-mentioned, and the other, we believe, is medical officer at Ben Rhydding Hydropathic Establishment. We would assure the near relatives of Mr. Arthur of the deep sympathy of the profession.

THE PREVENTION OF INJURY TO HEALTH.

IN connexion with an effort to improve the navigation of the river at Lymington, an accumulation of mud deposited in its bed, and containing sewage matter, is being heaped up in one of the marshes in front of houses in the Bath-road, and in view of the opinion of the medical officer of health to the effect that danger to health might be anticipated from it, the Local Board of Health passed a resolution to serve a notice on the contractor carrying out the works, requiring the abatement of the nuisance and the removal of the mud within four days. No action was taken on this notice, and within a few days the Local Board met again, and by a majority of three rescinded their resolution, determining to take no notice of the mud accumulation for the present, and this notwithstanding the protest of the medical officer of health, who again called attention to the danger incurred, and of another medical practitioner, who reminded the authority of the serious results which, as we recently pointed out in connexion with Dr. Airy's official reports on diphtheria, had followed a similar proceeding at King's Lynn. The grounds for this reversal of a previous decision were several, but one which was strongly pressed deserves notice. It was that persons had lived near the locality for a long period without being injuriously affected by the sewage mud. In using such an argument—and we regret to say that it is by no means unusual—sanitary authorities seem to forget that one of their principal duties is the prevention of injury to health, and that it is no part of their functions to await the production of the very condition which their preventive measures ought to render impossible.

ERYSIPELATOUS ORGANISMS.

IN several patients suffering from erysipelas Fehleison has found micrococci to be constantly present in the lymphatic vessels of the skin in the parts invaded by the inflammation. He has endeavoured to ascertain whether these organisms can be regarded as the veritable cause of the disease. The method of his proceeding (according to an abstract which has appeared in the *Gazette Médicale de Paris*) was to excise minute fragments of skin, having first washed the surface with ether and with a solution of corrosive sublimate. These fragments were afterwards placed in gelatine prepared after the method of Koch. The micrococci rapidly grew, forming an abundant vegetation around the small fragments. By means of a platinum needle the mould was transplanted from one spot to another on the surface of the gelatine, and a thin membrane formed around each point of inoculation. The colonies of micrococci grew slowly, and at the usual temperature of the air their development soon became arrested. The organisms appeared identical in appearance with those seen in the fresh preparations, except that in the gelatine the micro-organisms formed longer chains. Fehleison tested the virulence of the fourth generation of these organisms by an operation which most of our readers will probably agree with us in considering wholly unjustifiable. He inoculated the germs in the skin of the gluteal region of a woman, aged fifty-eight, suffering from multiple fibro-sarcomata of the skin. The inoculation was made by five punctures with a lancet. Up to that time the temperature of the patient was normal. On the evening of the inoculation the temperature was 37·7° C., but the next day the woman had a slight rigor, headache came on in the course of the day, and in the evening the temperature was 38·8° (101° F.) On the morning of the third day it was 37·2°, and in the evening 37·8°. On the fourth day another rigor occurred, and there was found on the left buttock an erythematous patch, prominent and circumscribed, having all the characteristics of erysipelas, and during the day it spread considerably in extent. The temperature was 40·4° (104·7° F.) in the morning, and 40·6° in the evening. On the fifth and sixth days the temperature was 41° C. (105·8° F.), and on the latter the woman fell into a state of collapse, from which she was roused by a subcutaneous injection of ether. On the seventh day the erysipelas occupied an area of a square foot. It remained stationary during the next three days, the temperature oscillating between 39·2° (102·6° F.) and 40·6° (105° F.); then the erythematous patch began to subside, but the temperature continued raised, and even on the thirteenth day was 40·0° (104° F.), but after the fifteenth day it was normal. As a consequence the infiltrations of the skin

seemed to have slightly lessened. The author remarks that erysipelas can readily be communicated to rabbits, especially if the inoculation is made upon the ear. We echo the hope expressed by the editor of the *Gazette Médicale*, that those who endeavour to corroborate the observation, if rabbits do not suffice for their needs, will have the courage to operate on themselves.

NEW ZEALAND LUNATIC ASYLUM REPORTS FOR 1881.

THE post of inspector of asylums being vacant by the death of Dr. Skae, the reports have been furnished by the deputy inspectors and superintendents. These state that at the end of 1881 there were 769 males and 406 females in the seven asylums of the colony, being an increase of 40 men and 10 women on the previous year. The relations which these figures bear to the sexes in the whole population are not stated. The disproportion between the two sexes seems very large, even in a colonial population, while the rate of increase might be assumed to be not in excess of the increase of inhabitants. The statistical tables are founded on those of the Medico-Psychological Association, and give the satisfactory result of 44·01 of recoveries on the admissions, the deaths being only 5·55 on the number under care. The re-admissions—67 in a total of 359 admitted in the year—point to a wholesome freedom in the discharge of patients. The table of the nationality of the insane shows that of the 1175 insane persons only 71 were born in New Zealand, while 346 were natives of Ireland, and 402 of England. Here, again, a comparison with the statistics of the general population would be of interest. The ascribed causes of insanity correspond very closely to those found in English asylums. In the causes of death, 27 out of 63 are ascribed to general paralysis, a larger proportion than the home statistics yield. Only one suicide is reported, and one fatal casualty. The Colonial Legislature seems to be actively alive to the importance of preventing the importation of insane persons, having passed an Imbecile Passengers Act, to deal with such cases. Might not the Home Legislature, with advantage to the community, take a hint from this? From the general tenor of the various reports, the conclusion may be drawn that the medical officers are striving actively in the direction of employment and amusement for the insane, and improvement in the quality of their attendants, the views expressed invariably advocating increased liberty and comfort for the patients.

THE FERMENTATION OF NITRATES.

THE researches of Schloesing and Muntz have shown that the formation of nitrates in the soil and in organic liquids is due to the development of aerobic organisms. Certain facts recorded by Boussingault, Schloesing, and others have suggested to MM. Gayon and Dupetit that the opposite process, the reduction of nitrates, may also take place in a similar manner. The results of an investigation which they have made has been communicated by them to the Académie des Sciences of Paris. To street drain water nitrate of potash was added in the proportion of ·02 gramme per litre, and then some decomposed urine. The nitrate disappeared gradually, and the liquid became filled with microscopic organisms. Successive cultures of these enabled the experimenters to effect the reduction of one and even two decigrammes of nitrate of potash per litre. By employing decoction of chicken as the basis they were enabled to decompose as much nitrate as amounted to 5 per cent. of the liquid. That the organisms which developed under these circumstances were really the cause of the denitrification was proved by sterilising the liquid by heat, or by the addition of chloroform, or sulphate of copper, when the nitrate of potash underwent no alteration. The organisms concerned seem to be anaerobic; if they were cultivated in a large surface, and in contact with air, either they did not produce the effect at all, or their action was considerably lessened. The temperature most favourable to the process was found to be between 35° and 40° C. The presence of organic matters is absolutely necessary, but all organic substances are not equally suitable. Of those which have been tried, olive oil, and oil of sweet almonds, glycerine, glycol, sugar, alcohols of the fatty series, tartrates, &c., the best results were given by sugar, ordinary alcohol, and propylic alcohol. For instance, three or four drops of the latter, added to a liquid in which the denitrification was suspended, at once renewed the process. The oils became rapidly saponified. Considerable interest attaches to the action of two substances, carbolic acid and salicylic acid. Employed in the proportions usually considered to be antiseptic, and even in still larger quantities, they not only did not interfere with the growth and activity of the organisms, but were themselves destroyed with the nitrate, just as sugar or propylic alcohol would be. The destruction of carbolic acid by organisms has been already observed by Muntz, even when it amounts to several grammes per litre. Thus under favourable circumstances the process of the destruction of nitrates presents all the characters of an energetic fermentation. It is accompanied by a rapid growth of organisms, and an abundant liberation of gas. This gas consists of pure nitrogen, and represents a considerable proportion of that contained in the nitrate. The rest probably forms ammonia. The oxygen forms carbonic acid, which remains combined in the liquid. The influence of the organic matter is thus to cause the products of the fermentation of the nitrate to enter into new combinations. Other nitrates behave in the same manner as the nitrate of potash.

ALCOHOL IN THE ST. PANCRAS WORKHOUSE.

DR. DUNLOP, medical officer to the St. Pancras workhouse, has had his attention called by a resolution of the guardians "to the present large consumption of beer, wine, and spirits in the workhouse, and to the question whether so large a consumption is necessary for medical purposes." He replies in an able letter, which is at present under the consideration of the Board. There is no doubt he takes a large view of the medical uses of alcohol—probably rather a larger one than is at present generally held. His therapeutical estimate of alcohol reminds us more of what we used to read in Dr. Todd's lectures twenty years ago than of the guarded and stinted admissions as to its occasional indispensableness which characterise the expression of present medical doctrine. He admits the deplorable mischief done by alcohol and says, "Alcoholic liquors are a most prolific source of pauperism, disease, and crime"; but with what seems a sort of homœopathic tendency, he thinks that a little alcohol is good for almost all sorts and conditions of paupers. It affords the greatest relief to the aged suffering from chronic disease; it is invaluable in lying-in wards; it is of the greatest service in the natural and artificial feeding of the insane; it is equally useful in the collapsed and in the convalescent stages of acute disease, especially pneumonia; in the case of scrofulous children port wine is a valuable agent; and in the diarrhœa and sickness of such children iced brandy will often avail when nothing else will. "As regards the prescription of porter, I look upon it both as an article of diet and as a fillip to the appetites of the aged sick and poor, to whom it is alone prescribed." This is undoubtedly hard doctrine for teetotal guardians. We will admit that it implies an estimate of the use of alcohol at all ages of pauperism, which in a workhouse infirmary, where any reasonable nourishment can be obtained—we think open to criticism alike from the scientific, the moral, and the ratepaying point of view. But Dr. Dunlop's letter is that of an earnest and intelligent

medical officer, and the guardians will find it best to do no more than raise the question to such an officer and leave him to grapple with it as he can.

REDUCTION OF DISLOCATIONS OF THE SHOULDER.

THE number of modes of reducing dislocations of the shoulder shows that the best plan is yet generally unknown. A valuable paper on this subject was read by M. Kocher at the meeting of the International Congress in London. Referring only to the subcoracoid form of dislocation, he asserts that the aim of the surgeon should be to open out the rent in the capsule, and to relax the parts of the capsule which are untorn but tightly stretched by the false position of the head of the humerus. The rent in the capsule is on the inner side of it; the most tense part is the upper portion where it is thickened by the coraco-humeral band; the lower part of the capsule is also tense. Kocher asserts that by rotating the arm outwards the top of the capsule is itself rotated out and the rent rendered patent. If now the arm be advanced in the vertical median plane, the upper part of the capsule is relaxed, and the head of the bone, being prevented passing forwards by the lower fibres of the capsule, enters the glenoid fossa. He accordingly directs that for the reduction of this dislocation the following manipulation should be practised. The patient should be seated, with the surgeon on his left hand. The elbow-joint is first to be flexed to a right angle, and the joint firmly pressed against the side of the chest; then while holding the elbow in contact with the body the arm is to be slowly, gently, and steadily rotated out until firm resistance is encountered; then maintaining this rotation the arm is to be raised forwards and a little in, and lastly to be rotated in and the hand brought towards the opposite shoulder. It is stated that there is no need for anæsthetics when this manipulation is employed. This method, which has great advantages over those in common use in this country, is stated by M. Ceppi (*Revue de Chirurgie*) to be especially valuable in old dislocations, enabling them to be reduced often without any force and without anæsthetics. M. Kocher has succeeded in twelve cases of dislocations, varying from three weeks to four months old. In one case, where the bone had been displaced for eight weeks, he fractured the shaft of the humerus in attempting the reduction, and six weeks later, when the bone was united, failed again. This patient was seventy years of age. We believe that this method of reduction is worthy of far more attention than it has yet received.

PROVIDENT DISPENSARIES AND AID FROM WITHOUT.

MR. VACHER, in speaking with satisfaction of the progress of the West Cheshire Provident Dispensary, said they were still to some extent dependent on aid from without. His words are worthy of attention when provident dispensaries are so lauded as the schools of providence and self-help. He said:—"I have referred to the portion of the income contributed by provident members rather than to the whole income, as the only right way of gauging success. I cannot, of course, say that we are independent of aid from without; nor can I hold out a hope that in course of time we shall be. Our experience has taught us that if the doctors are paid half the working men's subscriptions, the portion they are entitled to by the rules, the remaining half is just about sufficient to provide first-class drugs, the dispenser's salary, and our rent. Other incidental expenses, so far as we now see, must always be provided for in some other way. I may say that our experience is not exceptional. The committees of provident dispensaries all over the country have come to the same conclusion—namely, that help of some sort over and above the working-men's contributions is needed. However, many good friends have come forward to help us in the past, and I do not doubt will again." Such a representation of the system of provident dispensaries shows that they are not by any means perfect institutions, either from an economic or professional point of view. They pay their medical officers very inadequately—less than many good clubs do; and, secondly, they are dependent on charitable assistance. The families of working men who are fairly well employed should have no difficulty in paying a medical man two guineas a year, in monthly or quarterly instalments. This is much less than they spend on beer, and much less than many men who love their families, and appreciate their doctor, spend for medical services. We fear that the provident dispensaries are being so used as to lower the public sense of the value of medical service.

THE DEATH OF MR. BENJAMIN FIELD.

IT ought to be understood by patients who suffer from heart disease, and by their friends, that it is unsafe for them to make any special exertion, particularly of such a nature as to excite the heart to unusual activity. It is not necessary that those who are affected with cardiac maladies should have their lives embittered by continuous apprehensions, but they would do wisely to be warned that certain procedures are perilous, and to avoid them, without reference to feelings and inclinations. The dangers attendant on organic disease of the heart are physical, it may be said mechanical, and therefore they are, in a sense, almost always avoidable. The cracked pitcher will go for years to the well, and serve all legitimate purposes, if only it be borne in mind that it *is* cracked, and it is neither subjected to a special strain nor roughly handled. Possibly this might be more clearly understood by the public than it would seem to be, judging from the deaths from mismanagement, which are unhappily many and inexpressibly sad.

CROWDING ON THE UNDERGROUND RAILWAY.

THE crowding on the metropolitan and suburban lines of railway is simply disgraceful. Can nothing be done to put a stop to this practice? It is vain to expect the Companies to mend matters. They are chiefly intent on keeping down their expenses and raising their dividends. Unless the Board of Trade or some other authority can see its way to the appointment of a few travelling inspectors, who shall not wear uniform and shall take tickets as ordinary passengers, no reform can be anticipated. The matter is clearly one that requires attention. The overcrowding of railway carriages—to the extent sometimes of crowding twenty into the space intended for ten—is not simply an annoyance; it involves very serious peril to public health, and obviously more than doubles the risk to life and limb to which each passenger will be exposed in the event of an accident occurring to a train thus crowded.

EXTRAS FOR FRACTURE UNDER THE POOR LAW.

THE County Court judgment in the case of Grubb *v.* the Chesterton Board of Guardians will be read with satisfaction. The Board disputed the payment of £3 for the treatment of a fractured leg by Mr. Grubb on grounds set forth in the report in another column. Dr. Rogers was subpœnaed as representing the Poor Law Medical Officers' Association. Not only was the verdict strongly in favour of the surgeon claiming the ordinary fee, but the expenses of witnesses were allowed. We cannot but think that it would be well if the parsimoniousness of boards of guardians in the matter of medical fees were thus exposed a little more frequently.

THE MIDLAND RAILWAY TRAGEDY.

THE painful feeling general throughout the country regarding the new danger to railway travellers, revealed by the sad calamity of Sunday morning, will be intensified to the profession from the fact that the first victim is taken from our ranks. Hitherto such stories have come from the far West, the natural home of the sensational and of new horrors; but even there it would be difficult to find a similar sad scene to that enacted on our most luxurious railway route, as in America the construction of the carriages is such as to allow of free intercourse between all parts of the train, while we have but copied the travelling palaces, and placed them in isolated positions, with only an imperfect signalling arrangement. It is impossible to conceive a more tragic situation than that in which the occupants of the doomed Pullman found themselves placed when roused by the attendant; and on an occasion like this, unless the communication with the engine-driver can be effected simply and rapidly, it might as well be non-existent. Time after time the method now in use has been complained of as inefficient, and the present sad fatality may arouse the directors of the various railways to the necessity of better arrangements. The Midland Railway Company has always been governed by men who were in every way willing to ensure the safety and comfort of travellers by their route, and the public will look to them to adopt such means as may minimise the danger should the startling cry of fire be again raised in any of their carriages.

SIR THOMAS WATSON, BART.

THE chief change in Sir Thomas Watson's condition during the past week has been a gradually increasing weakness, with little or no alteration in the paralytic symptom. Since Thursday, the 26th ult., he has been confined to bed. The utmost amount of nourishment that he can be induced to take does not exceed a pint of milk in the twenty-four hours. He is in full possession of his mental faculties, and happily suffers no pain.

CYSTICERCI AND TAPEWORM.

THE coexistence of cysticerci and tæniæ in the same subject at the same time has been very rarely noted. An instance was described by MM. Rathery and Sevestre at a recent meeting of the Société Médicale des Hôpitaux. The existence of the tapeworm (tænia solium) was not suspected until it was found post mortem in the small intestine. The patient died from heart disease. Fifteen or sixteen cysts were found in different parts of the body. All were situated in the substance of the muscles. The existence of heart disease, and of hæmaturia shortly before death, had led to a suspicion that some of the cysticerci might be located in the kidneys or heart, but the autopsy showed that all the viscera were free.

THE PECULIAR PEOPLE.

ANOTHER little victim of the fanatical prejudice of the Peculiar People is reported in the *Chelmsford Chronicle* of October 27th—a child at Southend burnt by the flames of a petroleum lamp. The mother and father were "peculiar" in their religious and medical views, and, instead of calling in a doctor, called in an old woman who applied oil, and the elders of the church who "prayed over the child and anointed it with oil." Notwithstanding, it died a week after the burn. The coroner remarked on the impropriety of neglecting to seek medical aid, and pointed out that people had been tried for manslaughter in such cases. Mr. Jones gave it as his opinion that life might have been saved or prolonged by medical attention, but the jury contented themselves with a verdict of accidental death. It is more easy to complain of this verdict than to see how any amount of punishment or imprisonment would help children who have the misfortune to have such "peculiar" parents.

THE LATE MR. GEORGE CRITCHETT.

WE regret to have to announce the death of Mr. Critchett, the oculist, on Wednesday last, at his residence in Harley-street. Though Mr. Critchett had been seriously ill and confined to his rooms for some weeks, his medical advisers were not without hope of his recovery until Sunday last. His powers from that time steadily failed. We hope next week to give a fuller notice of Mr. Critchett's work.

GLASGOW DRAFT POLICE BILL.

THE Faculty of Physicians and Surgeons met on Monday last to discuss this measure, with the result of bringing out an entire unanimity of feeling in opposition to the compulsory notification clauses of the Bill, in so far as they lay on the medical attendant the onus of reporting infectious diseases to the sanitary authorities; and a resolution was unanimously adopted recommending rather that the medical attendant should be asked to certify the case to the householder or guardian of the patient, and that this guardian should be bound to report to the authorities. A committee was appointed to draw up a memorial to the Town Council urging this view of the matter.

MOST neurological workers on this side of the Atlantic are familiar with the name and writings of Dr. Seguin of New York, and will learn with almost personal sorrow the terrible calamity which has befallen him—an event not often equalled in the horrors of insane homicide, and probably altogether without parallel in its signally pathetic circumstances. On Wednesday last Mrs. Seguin tied the hands of her three young children behind their backs, blindfolded them, and then shot them through the head, apparently while playing "blind man's buff" in an empty room in the top of the house. She then shot herself also through the head. Mother and children were all dead when the deed was discovered. Three pistols were found in the room. She had been depressed for several days. The case is a terrible illustration of the insidious manner in which homicidal and suicidal tendencies come on in melancholia, since an experienced specialist like Dr. Seguin cannot have suspected their existence even in the person most near to him.

IN a *brochure* just published, Mr. Chas. J. Hancock describes the condition of anæmia, followed by general dropsy, so prevalent among natives of tropical countries. His handbook deals solely with the disease as seen among coolies, and contains much that is of practical value in the treatment of the sick. Originally addressed in the form of a letter to certain proprietors and managers of tea estates, it is now reproduced in a pamphlet form, and should prove useful to practitioners in the colonies, where coolie labour is much employed.

ADVICES from Cape Town, dated Oct. 11th, state the epidemic of small-pox is still steadily declining, and the Mayor, at the last meeting of the Town Council, said that two medical men would be sufficient to attend to the cases now existing in Cape Town. At Durban, Natal, the Government is building a small-pox hospital on the Bluff. It is thought that about thirty beds will be sufficient. The hospital is being built only in case the disease should break out in the town.

THE Landon Memorial Brass Committee have decided to hand over the surplus money subscribed to Mr. Landon's Memorial to the Fund now being raised for a Memorial to the Officers of the Army Medical Department who fell in the recent campaigns in Afghanistan and South Africa. This Memorial will, of course, include the name of Mr. Landon.

THE yellow fever epidemic in Florida still rages with unabated virulence, and is spreading northwards and westwards. At Pensacola the total number of cases reported up to October 16th was 1677. Many of the medical attendants have themselves been attacked, and one of them, Dr. S. C. Macintyre, has succumbed to the disease.

JAMES ANDERSON, M.D., C.M., M.R.C.P. Lond., Assistant-Physician to the Victoria Park Chest Hospital, Junior Demonstrator of Anatomy in the London Hospital, has been appointed Examiner in Anatomy at the Royal College of Physicians of London.

PROFESSOR NOTHNAGEL was warmly welcomed by the students on the occasion of his first clinical lecture since his appointment to the Vienna chair. He prefaced his lecture by a short address, in which he alluded to his predecessors Duchek and Skoda, and spoke of the methods of clinical study.

M. LELOIR, relating in last week's *Progrès Médical* his experience of the system of continuous baths in the treatment of skin disease as carried out in Vienna, reports very favourably on the procedure, and advocates its introduction into the St. Louis Hospital at Paris.

IT is announced that Major-General Sir Evelyn Wood, V.C., K.C.B., has been selected to serve as a member of the Committee appointed to inquire into the alleged shortcomings of the Army Medical Service in Egypt. The Committee met on Wednesday at the War Office.

THE Bangor fever outbreak has virtually subsided. Nearly all the existing cases are in a convalescent state, and the use of the hospital tents in the Bishop's Park is to be discontinued.

THE fever epidemic which has been prevalent in Johnstone, N.B., for the past six weeks is still exciting considerable alarm. There is some uncertainty as to whether the fever is even yet showing any signs of abatement.

DR. J. I. BANKS has been elected a representative of the Royal University of Ireland on the General Medical Council for three years from January next.

THE Dictionary of Medicine, by various writers, under the editorship of Dr. Quain, has just been issued by Messrs. Longman and Co.

SIR JAMES PAGET, Bart., has fixed Wednesday, the 13th of December, for the delivery of the first Bradshawe Lecture at the Royal College of Surgeons.

WE regret to learn from the *Daily Telegraph and Deccan Herald* of Oct. 5th that Surgeon-General Beatty, of the Bombay Army, has sustained a severe fracture of the leg.

DR. ROBERT BARNES has been elected an Honorary Fellow of the Obstetrical Society of Edinburgh.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Bullet Wound of Lower Jaw.—Hæmorrhage after Scarlatina, Ligature of Common Carotid Artery.—Bilharzia Hæmatobia.

AN ordinary meeting of the Clinical Society of London was held on Friday, Oct. 27th, J. Lister, Esq., F.R.S., in the chair. Mr. Lister stated that he had received a letter from M. Ollier of Lyons, expressing his high sense of the honour conferred upon him in electing him an honorary member of the Society. The three communications read were all of them of considerable interest, and that of Dr. Mahomed and Mr. Pepper gave rise to a lively discussion.

Mr. W. J. WALSHAM narrated a case of Gunshot Injury of the Lower Jaw. H. W——, a woman twenty years of age, was admitted into the Metropolitan Free Hospital, under Mr. Walsham's care, on July 16th, having been shot with a revolver. The wound was situated about an inch above the angle of the jaw, and passed in a direction backwards, inwards, and upwards. The wound was enlarged, and the jaw was found perforated; the finger could be passed in as far as the first interphalangeal joint, but neither with it nor with a probe could the bullet be felt. On examining the mouth a slight fulness above the right tonsil was seen, but there was no wound nor definite indication of the bullet. Considering the importance of the structures among which the bullet was evidently imbedded it was not deemed prudent to endeavour to extract it. The patient was quieted by opiates, and water dressing was applied to the wound. Considerable swelling about the angle of the jaw in the region of the tonsil supervened, accompanied by a constant dribbling of saliva from the mouth. On July 25th a spiculum of bone, accompanied by a small part of the crown of the wisdom tooth, and on the 26th the bullet with the remainder of the wisdom tooth imbedded in it, were discharged. The patient progressed satisfactorily, and left the hospital on Aug. 16th with the wound nearly healed. Mr. Walsham remarked that the chief point of interest, in addition to others, lay in the question of treatment. Three distinct courses presented themselves: to attempt the extraction of the bullet through the external wound; to cut down upon it, and remove it through the mouth; or to leave it, in the hope that it might escape spontaneously or become encysted. The objections to the first were that a large portion of the jaw would have to be cut away to obtain room for the necessary manipulations, that the exact situation of the bullet was not known, and that there would have been considerable risk of wounding some of the large vessels and nerves between which the bullet had evidently passed. Against the plan of removing it through the mouth the fulness about the tonsil did not seem to point sufficiently clearly to that being the situation of the bullet to justify an incision in such a dangerous region. The course pursued in face of these considerations was to leave the bullet to come away spontaneously.—Mr. LISTER said the case was interesting as an example of perforation of the lower jaw without fracture, which was remarkable in a bone of such density. He quite agreed that it was right to have left the bullet alone. The bullet itself was not so much a source of evil—not so mischievous as attempts to remove it. But as there was no evidence of communication with the mouth, the case admitted of strict antiseptic treatment, and he thought it would have been wise to have tried to keep the wound aseptic; if this attempt had succeeded all danger of secondary hæmorrhage and deep suppuration would have been avoided. Happily, however, these did not occur.—Mr. WALSHAM replied that he had thought of this line of treatment, but that as the bullet had carried in septic materials, he considered it would have been difficult to render the wound aseptic, especially as he did not know the course of the bullet.

Dr. MAHOMED and Mr. PEPPER read notes of a case on which Mr. A. J. Pepper had successfully tied the common carotid artery for severe bleeding from the throat after an attack of scarlet fever. C. W——, aged thirty, was admitted into the Fever Hospital, under the care of Dr. Mahomed, on Jan. 2nd, 1882, suffering from scarlet fever, which ran a simple course with ordinary convalescence until

Feb. 22nd, when the patient shivered and complained of sore-throat; temperature 101·2° F. On the next morning the uvula was large and translucent, and there were redness and swelling of the palate. On the 24th he complained of great difficulty in swallowing and throbbing of the left side of the throat. Two hæmorrhagic patches had appeared at the junction of the hard and soft palates with a large gelatinous bleb on the left side. Three hours later the throat, especially the left side, became rapidly swollen, accompanied by a feeling of suffocation; soon after the patient brought up a considerable quantity of blood; the swelling and difficulty of breathing subsided, at the same time the hoarseness passed quite suddenly into complete aphonia, which persisted. The alternate enlargement of the neck, hæmorrhage, and subsidence of the swelling were repeated several times until the morning of the 27th, when the patient's condition became critical, he having lost forty ounces of blood in all, and there was no sign of arrest of the hæmorrhage; there was a considerable bulging of the left side of the neck, marked dyspnœa, and aphonia. At a consultation between Dr. Mahomed and Mr. Pepper it was decided to ligature the left common carotid artery, as it was thought dangerous to cut into the post-pharyngeal abscess. The patient was put under chloroform and the artery tied by Mr. Pepper at the upper border of the omo-hyoid muscle. Considerable difficulty was caused by the greatly distended state of the veins; carbolised catgut was used, and the operation performed antiseptically. For a time respiration threatened to fail, but the man rallied in three or four hours. Soon after the operation he brought up six ounces of pus, and there was a corresponding diminution of the swelling. The temperature at once became normal, and the wound healed rapidly.—April 7th: Numbness of skin corresponding to distribution of superficial cervical nerve; partial aphonia; fixation of left vocal cord; general health good.—Dr. MAHOMED remarked that secondary sore-throat after scarlatina was not uncommon, having occurred fifty-seven times out of 3937 consecutive cases treated during the last ten years at the Fever Hospital. It resembled the condition of the throat seen in the primary attack. He considered it to be a modified second attack of the disease dependent upon concentration of the poison, for it was most frequent when the wards were overcrowded and badly ventilated. It had never been fatal at the hospital. Complete second attacks, with rash, sore-throat, and fever, occurred in twenty-nine cases out of 3957; all recovered save one, who died from other complications. Hæmorrhage from the throat was a rare but very dangerous complication. It might occur during the primary or secondary throat affection. It resulted either from sloughing of the soft palate, or, as in this case, from opening of a vessel into an abscess. There had been six cases at the Fever Hospital in ten years, and all the severe ones, except this case, had been fatal. The ligature of the artery appeared to exert a very beneficial action over the inflammation, which recovered most rapidly and completely.—Mr. HOWARD MARSH said that at St. Bartholomew's Hospital there had been within the last few years several cases of abscesses ulcerating into large arteries. One of these was a case of unopened psoas abscess, which suddenly became very distended, and post mortem it was found that the aorta had given way into the abscess. Another case was one in which Mr. Morrant Baker tied the common iliac artery for hæmorrhage which occurred on opening a gluteal abscess, and afterwards a free opening of the gluteal artery into the abscess was found. In another case of an open ischio-rectal abscess free hæmorrhage occurred from the internal pudic artery; and, in yet another, hæmorrhage occurred into a perineal abscess; both these latter were successfully treated by pressure. In a case of abscess in the neck in which hæmorrhage occurred, ligature of the common carotid artery did not control the bleeding. He referred to a case in St. George's Hospital where, for a wound of a large artery high up in the neck, the common carotid was successfully tied lower down.—Dr. DYCE DUCKWORTH thought this case unique; in his experience all cases of such hæmorrhage had been fatal, the rush of blood had been sudden and profuse.—Mr. CRIPPS referred to his paper read at the Medico-Chirurgical Society on the treatment of hæmorrhage from punctured wounds in the throat and neck. He thought that ligature of the common carotid artery was a very fatal operation—56 per cent. of deaths,—and was more fatal when performed from hæmorrhage than from aneurism. In 28 per cent. of the deaths the fatal result occurred from brain symptoms, and in 28 per cent. from recurrent hæmorrhage. In these cases he thought the external carotid artery was the one to be tied, as then the brain was not deprived of blood. Recurrent hæmorrhage occurred owing to the free anastomoses of the vessels, and especially owing to blood coming from the circle of Willis, and passing over the bifurcation of the common carotid into the external carotid. With extreme rarity had the bleeding artery been shown to be the internal carotid in these cases, but in nearly all dissected cases a branch of the external carotid artery was wounded, and to tie this latter vessel was the right line of practice. This operation was not liable to be followed by secondary hæmorrhage, less liable than the ligature of any other deep artery, and the artery was easily found. If the blood actually came from the internal carotid artery, he thought there would be no time for any operation at all.—Mr. RICKMAN GODLEE spoke of a very chronic case of psoas abscess with disease of dorsal vertebræ. When dilating two sinuses in the groin, the external iliac artery was felt between them, and a few days ago fatal hæmorrhage occurred from the common iliac artery.—Mr. JAMES BLACK referred to a case of quinsy in St. Thomas's Hospital, in which severe hæmorrhage occurred; Mr. Pitts tied the common carotid artery, the bleeding recurred two days later, and was then fatal, and at the autopsy the internal carotid artery was seen to be opened by ulceration.—Mr. A. BARKER asked if the bleeding spot in the throat was seen.—Mr. PEPPER: No.—Mr. LISTER said the case was one of great interest. Where possible it was best to treat the bleeding point rather than the main arterial trunk. Here to get at the bleeding point was impossible. From the result he thought the bleeding artery must have been small, if the blood did not actually come from the walls of the abscess cavity from tension. He had seen cases of abscess in which hæmorrhage occurred from the disturbance produced by tension; and in this case he thought the hæmorrhage might possibly have been stopped by a free incision into the abscess. He agreed with Mr. Cripps that in these cases it must be a branch of the external carotid that was wounded, as a wound of the internal carotid would certainly be rapidly fatal.—Mr. HOWARD MARSH'S cases were very interesting, for in the majority of cases of abscesses ulcerating into large arteries the artery gives way after the abscess had been opened, and in support of this he referred to Liston's celebrated case and to the fact that at that time surgeons would scarcely admit the possibility of an artery being opened up by an unopened abscess.—Mr. PEPPER thought that the blood in such cases of abscess near the tonsil probably came from the ascending pharyngeal artery, which arises close to the bifurcation of the common carotid artery, and which would not be affected by ligature of the external carotid. Another reason for his line of action was, that an incision high enough to lay bare the external carotid artery would have opened up the sloughing cavity of the abscess and have prevented the operation being aseptic. He thought the large amount of the hæmorrhage showed that the blood came from a good-sized artery.—Dr. MAHOMED said that the position of the ligature was most carefully considered, and he thought to ligature the external carotid would have been attended with great risk. He remarked upon the great rarity of cases in which hæmorrhage occurred from arteries laid bare by pulmonary abscesses. A short time ago he had under his care for a time a case of splenic leukæmia; there was a large fluctuating swelling over the buttock, which was thought to contain pus. Mr. Symonds opened it, and it proved to be a diffuse hæmorrhage into the cellular tissue, and there was the greatest difficulty in controlling the hæmorrhage, which was only stopped by laying the cavity open very freely and plugging it firmly from the bottom.

Dr. RADCLIFFE CROCKER showed the Ova and Embryo of Bilharzia Hæmatobia, and related a case of hæmaturia produced by that parasite which came under the care of Dr. George Bird at the beginning of the year. The patient was a boy at school, aged thirteen years, who was born in the Orange Free State, but appeared to have caught the disease in Natal, where he passed blood both by the urethra and bowel, and had been treated for dysentery. A few months after his arrival in England hæmaturia recurred in considerable quantity, and produced so much dysuria as to necessitate the use of the catheter, and a small clot of blood which clung to the eye of the catheter having been removed by Dr. Crocker, the characteristic ova of bilharzia hæmatobia were discovered. All troublesome symptoms soon disappeared, and, with the exception of slight anæmia, the boy seemed to

be in good health, nevertheless the parasites are still present, and ova and a little blood were found in all three specimens of urine passed at different times in the day on Oct. 4th. The spine on the ovum was always terminal, as is usually the case in those discharged from the veins of the bladder; and the head of the embryo showed no special preference for the head end of the ovum. As the disease usually gets well spontaneously after puberty, no local treatment for the destruction of the parent distoma had been employed. In blood taken from the finger at night no filariæ were discovered.—Mr. PEPPER asked how injecting fluid into the bladder would succeed in killing the parasites.—Dr. CROCKER said that was the treatment adopted by Dr. James Allen of Natal, who says he has met with great success from it. In most cases the parasites are found only in the veins of the bladder, although in other cases, no doubt, they were present higher up the urinary tract. Dr. Allen had spoken favourably also of the internal administration of santonin.

MEDICAL SOCIETY OF LONDON.

Chancre on the Cheek; Cardiac Aneurism; Experience of 600 Cases of Diabetes.

AT the meeting of this Society, held on the 30th ult., F. Mason, Esq., President, in the chair,

Mr. PEARCE GOULD showed a man with a Hunterian Chancre on his Cheek. The patient, a young married man, came to the Westminster Hospital ten days previously. The chancre was as large as a halfpenny piece, defined and moderately indurated, with an abraded surface. There was one enlarged gland over the parotid gland and several below the jaw. There was also an abundant roseolous rash over the trunk, and very slight sore-throat. The chancre had been noticed altogether two months, and was now rapidly improving under mercurial treatment. The only clue to the mode of infection was the fact that he was in the habit of "larking" and taking his meals with a cousin who was suffering at the time from a severe attack of syphilis.—The PRESIDENT mentioned similar cases which he had recorded before the Society and in the St. Thomas's Hospital Reports, and laid stress upon the necessity for accurate diagnosis, as in some cases operations had been undertaken for the removal of chancres of the lip mistaken for cancer.—Mr. ROYES BELL referred to two cases, and Mr. E. OWEN to another, the latter remarking on the size and spongy character of the sore in Mr. Gould's case—similar to the chancres that sometimes occur on the fingers of medical men.—The PRESIDENT remarked upon the comparative rarity with which medical men were inoculated, seeing the risk they constantly ran in examining cases of syphilis.—Mr. GOULD, in reply, said he had seen a similar sore over the malar bone of a young girl communicated by a kiss from an infected person: also another in a girl six years of age. He related a case which he saw last week, where there appeared conclusive evidence of indirect inoculation through a w.c.

Dr. ISAMBARD OWEN showed two specimens of Cardiac Aneurism from the post-mortem room of St. George's Hospital. In both, the thinning of the wall affected the apical half of the left ventricle. Of one only, in which dilatation of the thinned cavity was not very marked, were clinical details available. This patient was aged sixty-one; the symptoms—short breath, cough, palpitation, and pain in the left side, had lasted seven years. The apex beat on the fifth space just inside the nipple line. The cardiac sounds were weak and both reduplicated; the pulse weak and dicrotous. There was no murmur. The lungs were very emphysematous, the aorta very atheromatous, and the kidneys granular. The second patient was seventy years of age, and was brought in dead. The kidneys were granular, and the cerebral and iliac arteries atheromatous.

Dr. SEDGWICK read a paper communicated by Dr. R. Schmitz, of Neuenahr and San Remo, entitled "My Experiences of 600 Cases of Diabetes." Of this number 407 were males, and 193 females; 30 were below twenty years of age, 56 between twenty and thirty years, 80 above sixty, and 434 between thirty and sixty years. The fact that violent emotion, mental anxiety, excess of saccharine diet produce diabetes only in some persons was held to prove that there is a diabetic disposition, which is usually transmissible by heredity, and may be manifested in a family as diabetes, and also as psychoses, and perhaps as tuberculosis. A family tendency to diabetes occurred in 248 cases, to psychoses in 96, and to tuberculosis in 42 out of the 600 cases. A large proportion—viz., 93 cases—occurred in Jews. In 8 cases both husband and wife were suffering from diabetes at the same time. In 183 cases mental disturbance of some kind appeared as the exciting cause, in 45 cases gout, and in 22 the exhaustion consequent on severe disease. The urine was mostly clear, of a pale or light yellow colour, usually very acid, rarely neutral, very seldom alkaline; sp. gr. 1025 to 1030, never above 1042, frequently as low as 1013 to 1015. The average daily amount was 2500 c.c. to 3500 c.c., in one case as much as 9000 c.c. and in 40 as little as 500 c.c to 800 c.c., but in these latter cases there was profuse sweating. The day urine generally contained most sugar, especially that voided two or three hours after a meal; in some cases the night urine was the most saccharine. Mental exercise or anxiety notably increased the sugar, physical exertion rather diminishing it. The amount of sugar varied from 1 to 3 per cent. of the urine, rarely to 4, still more rarely to 5, very seldom to 6, and in only one case to 8 per cent. In some cases albumen was present to from 0·3 to 0·1 per cent., its amount often varying in inverse ratio to the amount of sugar. The albumen was increased by exhaustion and severe exercise, and after fasting, but decreased after a meal. After the disappearance of sugar there was often a material increase in phosphates, and in some a considerable amount of oxalates; in four cases hippuric acid was present. In two cases there was a substance, probably a modification of uric acid, which reduces copper in the same way as sugar, the practical importance of which was illustrated by the case of a physician who found that the "sugar test" increased when put on anti-diabetic diet. The polariscope and fermentation test eventually solved the problem, and the substance was found to disappear from the urine during the use of a mixed diet, to reappear when flesh was freely eaten. Dryness of the skin goes with increased quantity of urine and emaciation. If the skin acts well there is never extreme emaciation. In 35 cases there was distinct obesity. The weakness and prostration are due to a special pathological process in the muscles; and to this muscular degeneration are owing disorders of visual accommodation, constipation, and many of the cardiac symptons terminating in sudden death. The weak cardiac muscle caused in many cases an irregular, feeble pulse, and a very indistinct first sound, and in some violent exercise was followed by serious symptoms, as nausea, vomiting, drowsiness, great prostration, sometimes convulsions, temporary paralysis, and loss of consciousness. In these cases it is necessary to forbid the upright posture for some time, and to administer stimulants freely. In four such cases death resulted, and in two others on their way from Neuenahr—one with extreme muscular degeneration, the other from rupture of the heart. Such cases are miscalled "diabetic coma." They are due to an exhausted heart, resulting in arterial anæmia, venous hyperæmia, and the consequent carbonæmia. They may be confounded with those cases of acute poisoning called acetonæmia, of which he had seen six cases, but in these the attack is sudden, and although there is nausea and drowsiness the pulse is regular, rapid, Cheyne-Stokes' respiration, fetid odour of breath, and from the beginning frequent paroxysms of abdominal pain, rousing them up at intervals from their state of somnolence. No sugar is passed during the attack, and free purgation with castor oil, resulting in the passage of dark-coloured offensive motion, was of great service. If not relieved by purgation death occurred in coma mostly; in two cases in convulsions. Whether due to acetone or not, the author is convinced there are cases of acute poisoning from a very noxious substance developed from the decomposition of the sugar in the intestines. There are two forms of hunger—one due to excessive tissue change, the other a true neurosis, accompanied by occipital pain, and relieved by codeia or morphia, with potassium bromide. Some diabetics have an unaccountable desire for sugar. Total loss of appetite is very rare. The thirst is a result of the polyuria, not of the glycosuria. The sour alcoholic smell—termed by some acetone smell—is characteristic, and, except in the cases of acetonæmia, is proportioned to the amount of sugar in the urine. Looseness and falling out of the teeth is an early symptom, often accompanied by a spongy state of the gums; this is much benefited by rubbing the gums several times a day with a slice of lemon and the use of a gargle of sage and cochlearia. Constipation, alternating with diarrhœa, is frequent, depending not on the use of animal food but on atony of the muscular coat of the digestive canal. The diarrhœa, as a rule, begins in the night, after a continu-

ance of constipation, the fæces are fetid, watery and grey in colour, and the attack, invariably followed by great diminution in the amount of sugar, is believed by the author to be due to fermentation of sugar in the small intestine. Castor oil should be given, and failing relief, should be followed by bismuth or tannin; opium being objectionable. Neuroses of various kinds are by no means uncommon. Cramps in the calf of the leg are frequent, and when long-continued are little influenced by local narcotics. Crural neuralgia is common; sciatic and lumbar neuralgia more rare; cervico-occipital neuralgia occasionally, and in one case mastodynia (in a man aged seventy-five). Salicylate of soda and codeia are of most use for the relief of pain. The pruritus pudendi and balanitis may be neurotic, as well as directly caused by the sugar; a lotion of salicylic acid gave most relief. Tuberculosis was developed in the course of the disease in twenty-six cases, and was persisting in fifteen others. Impotence or diminished sexual desire was common, but in twelve patients there was increase of venereal desire. Dimness of vision is partly due to turbidity of lens, partly to loss of accommodation. Three cases of cataract occurred; they were operated on and did well. Boils were very common, caused by the nutritive disturbances of the skin. Several cases occurred in which the sugar permanently disappeared; this and the more common result of treatment—a great diminution in the quantity—are more often met with in those attacked in middle age than in youth, and much more often when the disease is recent than when it was of long standing. Much depends on the patient and his adherence to an anti-diabetic diet. When diabetes follows on disease of the central nervous system, tuberculosis, heart affections, or other organic mischief, the prognosis is bad; less so when grief, anxiety, or mental fatigue has been the cause; and still less unfavourable when excess of saccharine food has produced the malady. But the most favourable prognosis is to be given when gout is the origin of the diabetes, and also in diabetes arising during convalescence from typhus.—Dr. JAGIELSKI distinguished two groups of prominent symptoms—the neurotic and the digestive, and guided his treatment by the respective prominence of these groups. The paper did not state to what extent the use of the Neuenahr water entered into Dr. Schmitz's treatment. He deprecated a too rigid diet, and said that with the koumiss treatment he had been able, after a few weeks, to dispense with the absolute deprivation of starchy and saccharine matters. Good results had been obtained also by lactic acid, buttermilk, and skim-milk.—Dr. GREEN thought the paper failed to discriminate the different varieties of diabetes, several distinct conditions being linked together by the one common feature of glycosuria.—Dr. SEDGWICK said it was clear that nearly all Dr. Schmitz's cases were at any rate not cases of temporary glycosuria.

MEDICAL OFFICERS OF HEALTH SOCIETY.

THE first meeting of the present session of this Society was held at 1, Adam-street, Adelphi, on Friday, October 20th, Dr. J. W. Tripe, President, in the chair.

The PRESIDENT read a paper entitled "On Some of the Relations of Meteorological Phenomena to Man," of which the following is an abstract. He stated that he did not propose to discuss the effects of all meteorological phenomena on man, as sufficient data were wanting for a complete inquiry, neither should he enter into the effects of climate, for that word included not only all the elements which are classed together under the term weather, but also the physical peculiarities of the locality in question, the nature of the soil, and the extent of forests and other vegetation which modify the climate of a place. He referred briefly to the part played by oceanic currents in making the climate of England temperate and pleasant, as he considered this was insufficiently recognised. The relations existing between man and variations of atmospheric pressure, temperature, and humidity were next discussed, together with their influence upon disease and death. Dr. Tripe said it was only at considerable elevations, such as eight thousand feet above the sea level, that the variations in the atmospheric pressure were appreciable. People were then affected with so-called "mountain sickness," which consisted of malaise, shortness of breath, palpitation of the heart, nausea, with more or less giddiness and noises in the ears. Some persons suffer more than others, but nearly all in time become acclimatised. Aeronauts suffer from the same symptoms, showing that great muscular exertion is not the chief cause of the attack. Those who live on elevated mountain plateaux are observed to breathe more rapidly than those living at a lower elevation, their pulse increases in rapidity, and there is an increase in the evaporation from their skin and lungs, as well as a diminished secretion of urine. It is believed that all these symptoms are chiefly due to the diminution of oxygen in the air inspired, and consequently in the blood, and also to the imperfect exhalation of carbonic acid from the lungs, which, therefore, accumulates in the blood. The influence on man, and especially on invalids, of diminished atmospheric pressure, and of a lessened amount of oxygen inhaled, has been much considered of late, and while in some cases great benefit has been derived from a residence at high altitudes, in others change of residence has been of little or no use. Dr. Tripe considered that extreme cold also had something to do with the improvement manifested by phthisical patients. With regard to the effects of temperature on man, Dr. Tripe did not believe they depended so much on the mean temperature of the months and year as on the extent of range; for instance, when the day temperature is high and the night temperature comparatively low, the cold at night assists in procuring sleep and restoring the energy of the system which the heat had reduced. Variations in the pressure and temperature of the atmosphere exert a considerable effect on the circulation of air contained in the soil, or ground air, which consists of atmospheric air mixed with carbonic acid, marsh gas, and occasionally sulphuretted hydrogen. Rain also exerts a great influence on the ground water, and causes a rapid escape of air from the interstices of the soil. It is found that when the ground water is only five feet from the surface the locality is unhealthy, and also that a fluctuating level leads to ill-health amongst those residing on the spot. Outbreaks of typhoid fever have frequently occurred after heavy rain succeeding drought, which are believed to have originated from the infectious particles of typhoid excreta being washed into wells used for drinking. Damp soil is thought to be one cause of phthisis, and it has been shown that effective drainage of the land has caused a considerable diminution in the mortality from this disease. Wind influences to a great extent all meteorological phenomena, the humidity as well as the temperature of the air depending partly on the wind. Dr. Tripe pointed out that though much had been written concerning the effects of ozone on man, yet but little was really known about it. It is augmented by violent winds, and is met with chiefly at the seaside or in country places. There is but little doubt that it exercises an active oxidising action on the organic matter contained in the air, and is therefore absent in closely confined places where the air contains excess of organic matter. Dr. Tripe then alluded briefly to some of the individual diseases with which man is affected. He stated that it was only with great difficulty that reliable statistics on this point could be obtained, and that in an inquiry one or more elements must always be uniform and definite. If population be taken as a basis, corrections should be made for increase or decrease, and the condition of the population should also be considered. Care should be taken with regard to the initial periods of the inquiry and the time which should elapse after the occurrence of the weather discussed, and the registration of death. The number of meteorological elements to be embraced in the inquiry should also be decided. Dr. Tripe then referred to some papers already published by him on Medical Meteorology, in which he had stated the conclusions at which he arrived concerning the relations between the mortality from scarlet fever, lung diseases, diarrhœa, and meteorological phenomena. He believed that the periodical occurrence of epidemics did not depend on meteorological phenomena, but on the number of persons liable to the diseases living in the locality. In conclusion, Dr. Tripe made a few observations as to the temperature which induces the growth of bacteria so as to cause endemic or epidemic diseases, and also the influence of light on them, as illustrated by experiments made by Professor Tyndall and others.

On the motion of Dr. Bristowe and Dr. Stevenson a vote of thanks was unanimously accorded to the author of the paper, and the Society adjourned.

MEDICAL MAGISTRATE.—The name of Dr. W. W. Miller has been placed by the Lord Chancellor upon the Commission of the Peace for the County of Suffolk.

REPORT
OF
The Lancet Sanitary Commission
ON THE
ROYAL COURTS OF JUSTICE.

THE erection of a great public building in this sanitary age is a fact of such importance that we feel sure we shall not be accused of stepping beyond our province in devoting a portion of our space this week to a description of that magnificent palace in the Strand which is henceforth to be the headquarters of the legal administration of this country. The first effect of the building upon the non-legal visitor is to awaken him to a sense of the exceeding complexity of the legal machine. The nineteen Courts, and the innumerable offices for officials, who are but little known beyond legal circles, are calculated to impress one with the fact that the Utopia of the philosophic Radical, in which society is to move smoothly under the instinctive guidance of natural laws, untrammelled by the clumsy enactments of man, is in a future immeasurably distant.

What should be the essential features of a building intended for the purpose for which the Royal Courts of Justice have been erected?

1. Simplicity of plan, so that those who have business there may find their way with ease to any desired point.

2. Separation of parts devoted to different purposes sufficient to avoid confusion, without unnecessarily increasing the space to be traversed in going from one part to another.

3. Quiet, so that the mind can think and the voice be heard.

4. Perfect acoustic qualities in the rooms devoted to the public administration of justice.

5. A maximum of light in all the rooms, for they are all devoted to work which involves much writing and much reading of crabbed text, and that often by men who have reached a time of life when eyesight has begun to fail.

6. The most perfect ventilation obtainable, in order that the best work may be got from the brain-cells of the workers with the least damage to health.

7. The building should be of a character to impress the mind with the pomp and majesty of the law.

Now it seems to us that if a result is desired for our public buildings which shall at all attain perfection, the way to proceed would be as follows:—First to ascertain from those who are to work in the building the amount of space required, and the purposes for which it is to be used. This being known and reduced to definite quantities by skilled persons, the second step should be to invite competition for the best *plan*, the question of style being kept rigidly in abeyance. The plan being selected with reference solely to its suitability and convenience, the third and final step should be a second competition for the most effective building upon the selected plan. With many of our public buildings the all-important point of *plan* has been entirely subsidiary to the question of style, and the prize has usually fallen to those architects who have furnished the most imposing elevation; and the elevation having been chosen, the building has been made to answer its purpose only in a haphazard way, and often by dint of constructing a puzzling labyrinth of dark passages and inconvenient rooms. There can be no doubt that this inversion of the "natural" order of procedure has been the cause of failure and inconvenience in many of our public buildings. What should we think of a tailor who, instead of making the clothes to fit the man, proposed by dint of sheer force to make his customer suit the clothes? We cannot help thinking that this inverted procedure has governed the erection of the new Law Courts, at least to some extent, for the number of staircases is simply bewildering, and the passages are for the most part (especially in the eastern block) so dark that artificial illumination will have to be resorted to for the greater part of the year even in the daytime. That men advanced in years should have to mount some seventy or eighty steps in order to reach their official rooms is not creditable.

The artistic effect of the building appears to us to be all that can be desired. It is massive and imposing, and has a certain stern gracefulness which seems to tell of justice tempered by mercy, and this colossal work will be sufficient to place the name of Street quite on a level with the great artistic architects who have preceded him, with Inigo Jones, Wren, Barry, and Gilbert Scott. The style is Gothic, but of no one period, and this serves to give great variety to the outward effect. For solidity of construction it seems to us to equal the great buildings of the Middle Ages, and we trust that, unlike the Houses of Parliament, some generations may elapse before it is disfigured by the scaffoldings of tinkering masons. We are glad to see that an idea has been taken from Continental architects of providing in the original building for the necessity of repairs. The roofs, for instance, are everywhere studded by stout hooks, so that in the event of slates becoming loose it will be an easy matter to refix them, since a fir pole supported by two contiguous hooks will afford ample support for the slater or other workman.

But to come to details. The building is in two grand divisions. The western two-thirds of the building are devoted to the public administration of justice, while the eastern third, running parallel to Bell Yard, and extending from the Strand to Carey-street, is devoted to what we may call the more or less hidden machinery of the law, of which the public, other than litigants, takes little heed. A visit to this eastern part, a legal hive which has been in full work now for some time, is calculated to startle anyone who for the first time wanders among the hundreds of offices here congregated together. In the western part of the Royal Courts of Justice will be heard:—

> "The sad-eyed justice, with his surly hum
> Delivering o'er to executors pale
> The lazy yawning drone";

while in the eastern part execution will be done, and the drawing, quartering, and disembowelling of unsuccessful suitors will be methodically carried out. Assuredly in letters of gold, should be written, over the main entrance of this department, the advice which Polonius tendered to his son:—

> "Beware of entrance to a quarrel."

Entering from the Strand, through a highly ornamented porch and vestibule, we come into the great central hall, answering to Westminster Hall, and serving as a *Salle des pas perdus*. This hall is 232 feet long, 48 feet wide, and 80 feet high, and encloses rather more than 11,000 square feet of area, or about a quarter of an acre. The enclosing walls of this area are 500 feet in length. The decoration here is magnificent, and all the details, from the mosaic pavement to the elegant groined roof, reflect the artistic mind of the architect. This central hall gives access to the nineteen courts of justice. These courts are most of them approached by a vestibule building, and they are isolated buildings except where they are joined to the central hall on the one hand, and connected at their far ends by a building which affords a variety of accommodation for judges, barristers, juries, witnesses, and others concerned in the trials. This partial isolation of the courts admits of side-lighting as well as top-lighting, and a great deal of natural ventilation may be obtained in the summer by opening the windows. The deep, well-like spaces which are enclosed by contiguous courts are faced with white glazed brick in order that they may reflect as much light as possible. There is a certain similarity between the interiors of the various courts, but no two are precisely alike, and they differ in size and ornamentation, so that the practised eye would soon learn to identify each of them. The judges' bench, the barristers' seats, the strangers' gallery, witness-box, jury-box, &c., are all of oak, and much of the detail is exceedingly effective. The roof is slightly arched (waggon-shaped), and is lighted by a flat semi-opaque skylight. We should imagine that these courts have very good acoustic properties, and that the voice will easily reach all parts without producing any unpleasant echo. We think that the windows in most of them might have been larger with advantage; and it is certain that the pleasantest and most attractive of all the courts is one which has a very large ornamental window facing the judicial bench. The adequate ventilation of the courts has been very carefully considered, and the principle employed closely resembles that in use in the House of Commons. In the

basement at the north end of the central hall is a large cellar in which is a formidable army of steam-boilers and engines. These engines work fans whose function it is to propel air to each of the courts. The points of intake for the air, which are at the bottom of the spaces enclosed by contiguous courts, are carefully guarded from every source of impurity, and arrangements are made by which the air may be either cooled by being passed through a fine spray of cold water, or warmed by traversing a chamber heated by steam coils. The fan drives the air to a space beneath the floor of the court, and beneath every step in the floor (which has necessarily a constantly varying level in order to provide for the numerous raised seats and platforms) is an inlet for the fresh air. The outlet is at the highest point of the wall facing the bench and above the gallery devoted to the public. Through an ornamental grille in this position the foul hot air of the court finds its way into a long corridor, from which rise a series of shafts heated by steam-coils in order to ensure a constant upward stream in the air which passes through them. This machinery for supplying fresh and removing foul air will, as in the House of Commons, be under the care of a special officer, whose duty it will be to regulate the supply according to the demand, and to make the air cool, or warm, dry, or moist, according to the atmospheric conditions which may prevail. The mode of lighting the Courts has not yet been settled. This seems incredible, but we were assured it was a fact. Doubtless the Courts have been erected at a time when the question of lighting, whether by gas or electricity, has been considered in a very unsettled state, but it seems sad to think that the exquisite fittings of the Courts will probably, at no distant date, have to be disarranged in order to allow of the fixing of lights, and the passing of gas pipes or electrical conductors. The ventilation being quite independent of the question of lighting, the choice which may ultimately be made of an illuminating agent will not materially affect the sanitary condition of the Courts; but considering how great is the aid to ventilation afforded by well devised gas-lights, provided with proper flues, and how successfully gas has been used in this way in the Houses of Parliament, we are surprised that in not one of the Courts has such an arrangement been provided for. The gas lights throughout the building are of the crudest, oldest form, flaring extravagantly and fouling the air, but all these fittings are temporary only, and are not to be criticised. Fancy a building of this magnitude being completed in murky London before any comprehensive scheme for its healthy and effectual illumination has been arrived at!

The warming of the corridors and galleries of the building is mainly effected by means of steam coils, furnished with gills. These are placed in all instances against outside walls, and arrangements have been made for allowing fresh air from the outside to pass over the coils. In this way the close feeling which heated coils often give will be avoided.

On the side of the courts furthest removed from the central hall is a building devoted to apartments for persons officially connected with the business of the courts, judges, juries, witnesses (male and female), &c. The private rooms for the judges will, when finished, be very comfortable apartments. The grates in these rooms are modifications of Galton's grates, there being an air-chamber surrounding the fire-box, which communicates on the one hand with the outside air, and on the other with the apartment to be warmed. These grates are none of them smoke-consuming, and anyone who passes the new Law Courts may see volumes of defiling soot issuing from the handsome stone chimneys, which will soon bring Street's magnificent edifice to the grimy level of the rest of the metropolis. One cannot help thinking of Mr. Shaw Lefevre's promise made at the opening ceremony of the Smoke Abatement Exhibition in November last, that in the future our public buildings should be furnished with smoke-consuming grates. Whether it be that the Exhibition failed to furnish a satisfactory pattern, or whether the memories of ministers of State are not very stable, we do not pretend to decide, but certain it is that unless the State shows a determined resolution to diminish the smoke nuisance at all costs, it cannot expect the public to do so, and it can hardly pretend to enforce with any vigour the law which combats this particular form of nuisance. On the occasion alluded to, the First Commissioner of Works said, with regard to the smoke nuisance, that "the whole question was becoming one of very great urgency and importance. That the country would benefit if the greater purity of the air made the cleansing and maintenance of the public buildings less expensive was obvious; and it was obvious also that the change would be equally advantageous to the London parks and gardens, and, by consequence, to the health of the inhabitants. It was no easy matter to say what ought to be done, especially as the authors of the mischief were not so much the chimneys of manufactories as the number of private grates, of which as many as 800,000 were lighted in London every morning. He could only hope that for these offenders (*sic*) many of the smokeless grates in the exhibition would be satisfactory and popular substitutes." We recommend this speech to the re-perusal of the right honourable gentleman.

As regards the other sanitary arrangements (w.c.'s, urinals, &c.), we may say at once that they are on the whole satisfactory. The bulk of the closets are in the buildings which connect the central hall and the courts. They are tiled throughout with white glazed tiles, and light and air are freely admitted to all of them. The closets are Jennings' plug closets, without traps, and time alone will show whether these will prevent the reflux of sewer air into the building. The soil-pipes are all ventilated by pipes which have only half the diameter of the soil-pipes, and we cannot but think it would have been better to carry the soil-pipe itself to a level with the chimneys, and to have left it open. What is the nature of the connexion of the vertical soil-pipe with the drain, and how the drains of the building are connected with the sewer in the Strand, we were unable to learn. The urinals are of the beaked pattern. The walls of these apartments, we noticed, are finished at the bottom with a wooden plinth. This is clearly a mistake; the plinth should have been of some non-absorbing material, such as slate, and should have been securely cemented to the floor and wall. We were glad to notice in many places that the gas, water, soil, and other pipes were enclosed in a special channel in the wall, made readily accessible by means of a hinged door. Thus the pipes will be able to be repaired without any damage to the building; and what is no less important, the work of that most untrustworthy of creatures, the British plumber, will be constantly open to inspection.

ELEVENTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.

THE eleventh annual report of the Local Government Board gives a summary of the work done in all the numerous departments of that office, and these have so increased in number that it will be impossible to do more than glance at the more important of the matters referred to. The various details of Poor-law administration occupy the greater part of the volume. The amount spent in Poor-law relief during 1881 amounted to £8,102,136, being an increase at the rate of 1·1 per cent. on the amount for 1880; but tested by population and rateable value, there was a slight proportionate decrease. The advantages of giving relief to out-door paupers in "kind" rather than in money are forcibly pointed out. Advances in money are referred to as only a means of obtaining relief, a means, too, which the pauper is under a constant temptation to misapply, whereas relief in kind may be considered as the relief itself, the object of a genuine applicant being, not money, but the immediate means of sustenance. Since 1871 there has been a decrease in the ratio of paupers to population of 23·8 per cent., the principal decrease having taken place in the out-door class of poor, whose destitution is seldom subjected to any satisfactory test. Many workhouses have, indeed, been enlarged with a view of receiving a larger number of inmates in order that the amount of out-door relief administered may be effectually curtailed. The number of insane paupers is steadily on the increase, the total number now reaching 63,524. This is, doubtless, to a large extent due to the increased length of life which, under the present humane system, the pauper-lunatic enjoys, and also to the fact that diseased conditions of brain not formerly recognised as insanity are now included under that designation. In connexion with the subject of the isolation of paupers suffering from infectious diseases, the story of the late epidemic of small-pox is once more told, and it includes an account of the proceedings taken against the use of the Fulham Hospital, together with a reference to the establishment of the hospital

ship *Atlas*, and the tent encampment at Darenth, and some summary of the grounds which led to the appointment of the Royal Commission on Infectious Hospitals. The statistics of child-birth in workhouse infirmaries are dealt with at some length, with special reference to the fact that the death-rate from metria continues to be less in such establishments than amongst the entire population. The point has been often adverted to before, and it is somewhat remarkable, considering the number of deliveries amongst the unmarried who have necessarily, in many cases, been subject to the depressing influences of shame and trouble, to find statistics proving that a pauper woman in a workhouse has as good, if not a better, chance of recovery from childbirth than the ordinary poor woman in her own home.

Dealing next with questions of local government and public health, we find that since the institution of the Board in 1871, loans amounting to upwards of twenty-four millions have been sanctioned for sanitary and allied works to urban and rural sanitary authorities, by far the larger portion—namely, nearly twenty millions—having been advanced to urban authorities. The number of medical officers of health who are appointed subject to the regulations of the Local Government Board, and a moiety of whose salaries is repaid out of the Parliamentary grant, is now 1088. Of this number 543 act for urban, 518 for rural, and 27 for port sanitary districts. In several instances the Board has urged rural sanitary authorities to abandon the practice of appointing poor-law medical officers to act as medical officers of health for their respective districts, when one of the Board's medical inspectors has generally been appointed to inquire into the manner in which the duties of the officers in question have been performed, with the almost invariable result of showing that the sanitary needs of the district could be much more efficiently met by some other appointment. Indeed, it has become clear that an individual must not be invariably regarded as capable of filling an office of one sort merely because he already holds one involving other and very different duties. In most instances where the intervention of the Board has been required in this matter new appointments have been made which have met with the approval of the central authority.

Amongst the authorities who have been alleged to have failed in the performance of their duties, and concerning whom complaint has been made with a view to the exercise by the Board of its compulsory powers, are the Wem rural, and the Ely urban authorities in the matter of water-supply; the Cheshunt, Henley, Newquay, and Acton urban, and the Prestwich rural authorities as regards sewerage. In some of these cases the Board has issued a compulsory order under section 299 of the Public Health Act, but in others either no action has been deemed necessary, or further time has been given to the authorities to reconsider the expediency of voluntarily carrying out the needed works. In connexion with the Sale of Food and Drugs Act, it appears that the number of analyses made during 1881 was slightly in excess of those made in the previous year. One-third of the total was, however, made in the metropolis; in sixty-six boroughs none were made at all; and the number in many other districts was so small as to indicate clearly that there exists a great unwillingness on the part of many authorities, and especially on the part of the Town Councils of the smaller boroughs, to entertain any suspicion that their fellow-townsmen are capable of resorting to adulteration. The difficulties attendant upon obtaining convictions for the sale of milk mixed with water have been very considerably increased by the fact that milk from some ill-fed cows is really inferior in quality to much of the adulterated milk, and that science has, as yet, failed to distinguish between milk to which water has been added and that which, though poor, contains only its natural constituents. The fines inflicted when convictions are obtained are, also, far too small; for, as is pointed out in the report, this class of fraud is far too remunerative when persisted in to be stopped by penalties of ten or twenty shillings.

Dealing next with the question of vaccination, it appears that of the total number of children born about five per cent. remain unaccounted for, and the returns published for 1879 show that the metropolis and York have, and indeed continue to retain, the unenviable notoriety of standing worst in the list. In the metropolis the main default is due to the three districts of Camberwell, Lambeth, and Shoreditch, and some is owing to the circumstances that so many mothers leave workhouses and other lying-in institutions before the statutory period when the vaccination of their children comes due. This latter cause of default is now being dealt with by many guardians who seek to secure the vaccination of children born in workhouses at as early a period as is found practicable. The supply of calf lymph is now fully maintained, and gratuitous vaccination is in progress twice a week at the Calf Station in Lambs' Conduit-street. This and all the more medical questions will be fully dealt with in the next report of the Board's medical officer, but we may here state that in connexion with the notification of infectious diseases, five more boroughs have obtained powers under special Acts, there being at present twenty-three towns where such notification is in operation. The report next deals with such subjects as the working of the Alkali Act, the circumstances of the London water-supply, the reports made to the Board under the Metropolis Water Act, as also by analysts acting independently of that Act, and the question of local taxation and valuation, and it is followed by numerous appendices, amongst which is a special report by Mr. Gordon Smith, the Board's architect, on certain hospitals in Germany and France, which will repay an attentive perusal.

GLASGOW POLICE BILL.

A MOST interesting document is the draft of the new Police Bill, which the Glasgow municipality propose submitting for the approval of Parliament at an early date. If it becomes law, the Glasgow public will certainly be under paternal government of the strictest and severest type. Some of the general clauses seem harsh enough, more especially that, which is most criticised in Glasgow, giving powers to ordinary constables to enter houses in a summary and somewhat oppressive way. Even the Lord Provost, an advocate, of course, of the draft Bill, as it stands admits that "the powers are very great that are sought, and might be abused." Under this Bill no one may throw a snowball, fly a kite, make or use a slide, or trundle a hoop within the municipal boundaries; hard times, therefore, seem to be in store for the young people. The clause which provides that "any bull or other dangerous animal" must be "sufficiently secured by means of a rope attached to a ring through the nose of such animal or otherwise" may be commended to the consideration of our anti-vivisectionist friends in quest of a new sensation. The powers asked in regard to dealing with rabid dogs, or dogs suspected of rabies, or which have been bitten by rabid dogs, seem reasonable. In respect to noises, this Bill reads too good to be realisable: No one shall shout or use a bell or other noisy instrument—selling coals, &c.; no one shall use any steam whistle; no one shall play an organ or other instrument of music, or sing opposite or near any building after being requested to desist. If these provisions pass, and if the Glasgow authorities would only set seriously about the purification of their atmosphere, their city might soon become a veritable Arcadia.

But it is the increased powers asked by the Sanitary Authorities which will have most interest for medical men. These powers are pretty much like those which prevail already in many parts of England and Ireland, but they seem ample enough in all conscience. The various sanitary officers are entitled, at all hours of day or night, to enter "any land or heritage within the city which they shall suspect to be not in conformity with the provisions of this Act, under this head." Nuisances are brought very thoroughly under control, whether arising from offensive substances in store, such as rags, bones, blood, guano, paraffin oil, &c.; or from trades or businesses which are injurious to health or which cause annoyance to the neighbourhood, from smoke coming from fires or furnaces, from dirty sinks, soil-pipes, water-closets, &c., or from the keeping of cows or swine.

For the prevention and mitigation of disease, proprietors may be required to cleanse and lime-wash their dwelling-houses, factories, offices, &c.; the present hospitals for infectious diseases, the washing-house for the washing and disinfection of infected clothing, bedding, and so on, and the reception-house, provided as a temporary residence for persons removed from an infected house, are all to be maintained, and if necessary enlarged. Mortuaries and carriages suitable for the conveyance of dead bodies are to be provided. The term "Infectious Disease" is defined as including small-pox, cholera, typhus, enteric fever (otherwise called typhoid,

gastric, and infantile remittent fever), continued fever, scarlet fever, relapsing fever, diphtheria, measles, and whooping-cough, and such other diseases as the Board may from time to time, in the manner prescribed, declare to be infectious. A complete system of notification is also contemplated. As soon as any inmate of any house is discovered to be suffering from infectious disease, the occupier or person in charge of that house shall forthwith give notice thereof to the medical officer. Forms for notification are to be supplied gratuitously to medical practitioners. The medical attendant shall, on becoming aware that his patient is suffering from infectious disease, forthwith fill up, sign, and deliver, or send to the medical officer, a certificate stating the name of the patient, situation of building or ship in which the patient is lying, the name of the occupier of the house or the person in charge, and the nature of the infectious disease. For this the attendant shall receive a fee of 2*s.* 6*d.*; but no additional fee is to be paid for any certificate given by him in respect of the same infectious disease, occurring in the same house or ship at the same time, or within thirty days of the first certificate. The penalty for each wilful offence against this part of the Bill is forty shillings. Children who have been suffering from infectious disease are not to be sent to school till they can produce a medical certificate that they are free from disease and infection, and that the house and everything therein exposed to infection has been disinfected; both parents and teachers are responsible for offence against this clause—penalty forty shillings. Infected clothing, bedding, &c., are not to be exposed in common washing-houses or washing-greens till they have been disinfected. When infectious disease occurs in any overcrowded house, or any house which cannot be properly cleansed and disinfected while it is inhabited, all the inmates may be removed to the reception-house and boarded there, without interfering with their lawful business, for a period not exceeding fourteen days. The corpse of anyone dying of infectious disease, when it must otherwise lie in an occupied room, may be removed to a mortuary provided for the purpose. Corpses of those dying of infectious disease may not be transported in any public conveyance, except such a one specially reserved for such uses, unless, or until, the medical officer has certified that every precaution necessary for the public safety has been adopted to his satisfaction. "Wakes" become illegal in the case of those who have died of infectious disease.

To facilitate the tracing of an epidemic to its possible cause, cowkeepers, dairymen, &c. are bound to furnish a list of customers, and to produce invoices and furnish information as to those farmers from whom their milk is obtained. The sale of milk from an infected farm or dairy is prohibited.

When the medical officer thinks that in any existing buildings occupied as sleeping apartments an open space should be provided for the ventilation of such buildings, then this space may be provided, the owner being compensated.

Water used for drinking and cooking is not to be supplied from cisterns exposed in any way to contamination.

Proprietors are required to permit the application of the smoke test by the sanitary inspector, when the latter has reason to suspect that the drains are defective.

Comprehensive powers are also asked for the "regulation" of lodging-houses, more especially as regards licensing, registration, and the providing of medical relief for lodgers in case of illness, &c.

Unwholesome and adulterated foods are then dealt with. All dead meat brought into the city is, before sale, to be taken to certain places, and inspected. Unwholesome meats, &c. (various causes of unwholesomeness enumerated), must not be exposed for sale for food, under a ten pound penalty or sixty days' imprisonment. Butchers' shops and provision shops of all kinds are to be kept "clean and in good condition."

The construction and repair of sewers, the erection, alteration, and use of buildings, and the erection and maintenance of public baths and wash-houses, are all provided for. Adequate precautions are also taken against overcrowding, and for the provision of dungstead, ashpit, and privy accommodation. No apartment is to be used for sleeping in unless it has one or more windows. For persons of eight years and upwards 400 cubic feet of space are allowed in small dwelling-houses used for sleeping in; for children under eight 200 cubic feet. The Board have power to mark on such houses their size and the number who may live therein. It is also declared to be unlawful to let as dwelling-houses any buildings having less than a certain fixed minimum cubic measurement, varying, in houses of only one apartment, from 700 to 1200 cubic feet; in houses of two apartments from 1200 to 2000 cubic feet; and in houses of three apartments from 1800 to 2400 cubic feet.

Already there is springing up in Glasgow a very decided opposition to many of the provisions of this proposed Bill, many of the public regarding its general clauses as too despotic and tyrannical in their scope and possible application; while in the profession certain of the sanitary measures, whose adoption is proposed, are regarded with extreme disfavour—notably that concerning compulsory notification of infectious disease by the medical attendant. It is felt that not only is it unjust that medical men should be compelled, under a penalty, to report their cases of infectious disease, as if they were in any way responsible for the appearance of such diseases; but it is widely held that such a measure would only lead to more widespread concealment of such affections.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5681 births and 3477 deaths were registered during the week ending the 28th ult. The annual death-rate in these towns, which had been equal to 21·7 and 20·5 per 1000 in the two preceding weeks, rose again to 21·4 last week. The lowest death-rates in these towns last week were 16·9 in Bristol, 17·4 in Leicester, 17·6 in Salford, and 18·4 in Wolverhampton. The rates in the other towns ranged upwards to 28·3 in Birkenhead, 29·4 in Oldham, 32·9 in Sunderland, and 34·2 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 485, showing a further decline from the numbers in recent weeks; 120 resulted from scarlet fever, 103 from "fever" (principally enteric), 95 from diarrhœa, 91 from measles, 54 from whooping-cough, 17 from diphtheria, and 5 from small-pox. No death from any of these diseases was recorded in Wolverhampton, whereas they again caused the highest death-rates in Preston and Sunderland. Scarlet fever showed the largest proportional fatality in Leeds and Cardiff; "fever" in Portsmouth, Leeds, and Birkenhead; measles in Sheffield, Cardiff, and Sunderland; and whooping-cough in Preston and Birkenhead. The 17 deaths from diphtheria in the twenty-eight towns included 9 in London, and 2 both in Liverpool and Sheffield. Small-pox caused 3 deaths in London, and 2 in Newcastle-upon-Tyne. The number of small-pox patients in the metropolitan asylum hospitals, which had been 84 and 78 on the two preceding Saturdays, further declined to 72 at the end of last week; 8 new cases of small-pox were admitted to these hospitals during the week, corresponding with the number in the previous week. The Highgate Small-pox Hospital contained 7 patients on Saturday last, one new case having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 302 and 290 in the two preceding weeks, rose to 355 last week, but were 12 below the corrected weekly average. The causes of 86, or 2·5 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Leicester, Nottingham, Derby, Plymouth, and Huddersfield. The proportions of uncertified deaths were largest in Hull, Leeds, Bradford, and Plymouth.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which in the two preceding weeks had been equal to 19·2 and 19·7 per 1000, further rose to 21·4 in the week ending 28th ult.; this rate was identical with those which prevailed last week in the twenty-eight English towns. The deaths referred to the principal zymotic diseases in these Scotch towns, which had steadily declined in the four preceding weeks from 117 to 96, further fell to 89 last week. The deaths from these principal zymotic diseases averaged 3·8 per 1000 in the eight towns, and exceeded by 0·8 the rate from the same diseases in the large English towns. The 26 deaths attributed to diarrhœa were within two of the number in the previous week, and were proportionally thrice as numerous as the deaths from the same cause in the English towns. The 19

deaths from diphtheria showed an increase of three upon those in the previous week, and included 12 in Glasgow, 4 in Dundee, and 2 in Edinburgh. The fatal cases both of scarlet fever and whooping-cough, however, showed a further decline from recent weekly numbers; each of these two diseases caused 8 deaths in Glasgow. The 12 deaths referred to "fever" considerably exceeded the numbers in any of the four preceding weeks; 7 occurred in Glasgow, and 2 both in Leith and Perth. The deaths referred to acute diseases of lungs in the eight towns, which had been 100 and 108 in the two preceding weeks, further rose to 113 last week, and exceeded by 14 the number in the corresponding week of last year. No fewer than 88, or nearly 18 per cent., of the causes of the deaths registered in these Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 24·4 and 22·5 per 1000 in the two preceding weeks, was again 22·5 in the week ending the 28th ult. During the first four weeks of the current quarter the death-rate in the city averaged 22·3, against 19·8 in London and 17·3 in Edinburgh. The 150 deaths in Dublin last week corresponded with the number in the previous week, and included 5 which were referred to "fever," 5 to diarrhœa, 3 to whooping-cough, and not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths from these principal zymotic diseases, which had steadily declined in the six preceding weeks from 28 to 8, rose again last week to 13; these were equal to an annual rate of 1·9 per 1000, the rate from the same diseases last week being equal to 2·7 in London and 2·0 in Edinburgh. "Fever," to which no death had been attributed in the previous week, caused 5 deaths last week, a higher number than in any week since the first in September. The 5 deaths from diarrhœa, as well as the 3 from whooping-cough, also showed an increase upon recent weekly numbers. The deaths both of infants and of elderly persons showed a decline from those returned in the previous week, while those of children and adults aged between one and sixty years were more numerous.

THE SERVICES.

The Queen has approved of the retirement from the Service of Brigade-Surgeon William Henry Colvill, of the Bombay Army, and Surgeon-Major John Davies, of the Bombay Army.

BREVET. — Deputy Surgeon-General William Henry Adley, of the Bengal Army, to be Surgeon-General. Surgeon-Major George Edward Whitton, of the Madras Army, to be Brigade-Surgeon.

ARTILLERY VOLUNTEERS. — 1st Cornwall (Duke of Cornwall's): Surgeon Henry Grenfell is granted the honorary rank of Surgeon-Major. Thomas St. Patrick Tuckey, Gent., M.B., to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Cheshire: Alexander Craigmile, Gent., M.D., to be Acting Surgeon. 1st Inverness-shire (Inverness Highland): James Murray, Gent., M.D., to be Acting Surgeon. 1st Kent: Charles Boyce, Gent., M.B., to be Acting Surgeon. 1st Midlothian (Leith): Acting Surgeon William Alexander Finlay resigns his appointment.

ADMIRALTY.—Fleet Surgeon John Breakey, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet, with seniority of October 27th, 1882.

The following appointments have been made:—Deputy Inspector-General Thomas J. Breen, to the Chatham Division of Royal Marines, vice Bremner; Fleet Surgeon Charles Strickland, to the *Lord Warden*, vice Robertson; Fleet Surgeon Adam B. Messer, Surgeons Charles C. Godding and William G. K. Barnes, to the *Northampton*; Staff Surgeon James Bradley, to the *Valorous*, vice George B. Beale; Fleet Surgeon James N. J. O'Malley, to the *Minotaur*, vice Cooper; Fleet Surgeon Astley Cooper, to the *Agincourt*, vice O'Malley; John B. J. O'Meara, to be Surgeon and Agent at Sutton Bridge and Drove-end, vice Haines; Staff Surgeon Alfred G. Delmage, M.D., to the *Britannia*, vice Trevan; Staff Surgeon Robert Hay, M.D., to the *Constance*, vice Delmage; Surgeon Samuel C. Browne, to the *Indus*, vice Popham; Surgeon Charles H. Wheeler, M.D., to the *Indus*, additional for temporary service; Surgeon Edward G. Swan, to the *Cambridge*, vice Peyton; Surgeon Arthur W. E. B. Barrett, to the *Duke of Wellington*, additional; Surgeon Charles W. Sharples, to the *Asia*, vice Bradley; Surgeon Robert W. Anderson, to the *Lord Warden*; Staff Surgeon John Shields to the *Tenedos*.

Correspondence.

"Audi alteram partem."

"ON ABSORBENT DRESSINGS, ETC."

To the Editor of THE LANCET.

SIR,—In your issue of October 28th Mr. Rogers-Tillstone has ventured some remarks on my paper on Absorbent Dressings, published in your valuable journal of October 21st. I am sorry to be compelled to trespass on your space with a reply, but, as his criticisms are not strictly accurate, must crave the insertion of a few remarks.

In reference to Case 1, red lotion was not used (dry?) to take the place of dry dressing, but as a stimulant and astringent to the granulating surface. Unfortunately, we do not always get union by first intention when antiseptics are not used. The boracic lint was applied dry when I used it, but in the first instance was applied by the house-surgeon. Undue pressure did not cause the ulcer on the surface of the stump, nor did the want of antiseptic dressings cause the erysipelas. The boy was not removed out of the ward on account of erysipelas. He was discharged with a very small portion unhealed; and on the house-surgeon visiting him at his own house he found it was not properly dressed; he was therefore readmitted into the children's ward, but owing to cleaning, &c., going on in the ward, it had to be closed, and the patients removed. A week after his removal to the other ward erysipelas showed itself in the sound leg, and spread afterwards to the stump; this was treated with a solution of iron. We should never have dreamt of applying antiseptics to the sound limb, in which the erysipelas appeared first; perhaps contact with a stump so treated would have prevented it, no matter what amount of infection might have been present.

Case 3, Mr. Rogers-Tillstone says, "recovered in spite of everything, for the sutures ulcerated out and were replaced by strips of plaster." This is not accurate as to the sutures; perhaps one or two did cut their way through; but the acting house-surgeon, who put on the strips of plaster, informs me he removed most of the sutures, and I know that I took some out myself. No doubt the case did get well, and without antiseptic dressings. I rather fancy, if we had no *vis medicatrix naturæ*, carbolic acid would avail us little. I find, from notes supplied me, that the patient was operated on on May 18th. On the 22nd, four days after, the evening temperature had risen from 101·6° F. on the previous evening, to 103·8° F. The dressings were changed, and next morning the thermometer registered 98·2° F. morning, and 100·2° F. in the evening. About fourteen days after, I amputated through the hip-joint, and at the same time removed the arm four inches below the shoulder-joint, for a railway smash. I applied absorbent wool to the parts, but the man never rallied from the shock, and died a few hours afterwards. I did not know before reading Mr. Rogers-Tillstone's letter that this dry absorbent dressing had anything to do with the unfortunate result, or I should have reported the case with the others. If the man had lived long enough to have a change in the dressing, I should have included the case. The cases reported were to illustrate the advantages of an absorbent dressing, and not to record the number of operations. If carbolic spray would have enabled this man to rally from the shock, then I am certainly culpable.

With reference to Case 4, I sponged out the abscess cavity and the flaps with carbolic lotion, not for its antiseptic properties or with the idea of destroying germs, but for its astringent effects. It was in the operating theatre ready for use, but any astringent solution would have served my purpose. "From his cases we at least learn (?) what we knew before, and see once more that antiseptic dressings were followed by the best results in these cases. The fact that Mr. Berry only publishes his favourable cases takes materially from the value of his communication." Strange logic this; what a man knew before surely he has

no need to learn (?) again. Has Mr. Rogers-Tillstone unlearned anything by reading the paper? I myself have failed to learn "that the antiseptic dressings were followed by the best results." Case 4 had been treated with abundance of carbolic spray and lotion, yet, after his re-amputation and dry dressings, he recovered without a bad symptom.

I do not know of one case that has turned out unfavourably through the plan of dressings adopted, and if Mr. Rogers-Tillstone will kindly give them I shall be as gratified as any of your readers; but a critic who speaks of "antiseptic breath" should at least see that his own words are aseptic. Mr. Rogers-Tillstone was an assistant to one of the staff (who is a general practitioner), and had abundance of time and opportunities, and often visited our infirmary. It is a pity he did not suggest to his principal, or to the house-surgeons who believe in the antiseptic treatment, the mistakes they were committing. I myself would have been willing to sit at the feet of Gamaliel and been taught.

I did not think it requisite to make any reference to the amount of pressure (firm and equable pressure); I expected any tyro would know this, or, if he did not, would consult Mr. Gamgee's little work on the Treatment of Wounds. The pressure must be something more than a loose bandage for the dressings, and something less than sufficient to cause gangrene in the part.

Mr. Rogers-Tillstone's description of the manner in which Listerism is carried out at our institution may be correct. All I can say is that I have seen some of my colleagues operate in an atmosphere of spray, which I have no desire to imitate. If as good results can be obtained by the plan of treatment I adopted in the cases reported, I shall be satisfied to continue, without interfering with the practice pursued by my colleagues.

Apologising for troubling you at this length,

I remain yours truly,

Wigan, Oct. 29th, 1882. WM. BERRY.

"A SIMPLE OPERATION FOR VARICOCELE."

To the Editor of THE LANCET.

SIR,—If Dr. Campbell Black will refer again to my note which you published last week, he will find that, so far from giving a representation of a "granny" knot (a thing I never have employed), there is no knot whatever drawn. The mode of passing the loops above and below the vein is shown, but the knot is of course intended to be made *on each loop* in the ordinary way, and cut off short. The plan Dr. Black mentions is that advocated by Ricord, and one long adopted by many surgeons, but it is not practicable as a subcutaneous method, which is the chief point in what I wrote about.—I am, Sir, your obedient servant,

W. DUNNETT SPANTON.

Hanley, Staffordshire, Oct. 30th, 1882.

SCOTCH DIPLOMAS.

To the Editor of THE LANCET.

SIR,—The readers of THE LANCET must feel indebted to you for the summary of the Minutes of Evidence taken before the Royal Commission on Medical Acts.

As a Licentiate of the Faculty of Physicians and Surgeons, and therefore one of those gentlemen commiserated in your leaders of October 7th and 14th respectively, I beg to say that I feel happy, notwithstanding all the statements and hints thrown out against the Faculty. Many different factors, beyond the titles after one's name, constitute the attainment of professional success.

When I joined the medical classes, in the year 1857, "medical reform" was in the air, and anticipations of increasing strictness in future examinations were in every student's conversation. Since that time statesmen and medical reformers like Lord Palmerston and Professor Syme have passed away, with the cry for medical reform ringing, so to speak, in their ears. The agitation, *mutatis mutandis*, still continues.

Without endorsing the ideas of Herbert Spencer on free competition in medicine, I think that it is over-exacting to expect candidates to answer minute questions in general education, chemistry, and botany, which thousands already in the profession could not answer, and even the examiners may know only by revisal previous to the examinations. What the public require is not a closet philosopher, but a frank, active practitioner, who can speak and write grammatically, frame a good report, and be posted up in the practical details of his profession. It would be of no importance to a swooning puerperal patient that her medical attendant could square the circle, if he were ignorant of the best method to arrest hæmorrhage from the womb. The "well-educated" surgeon, referred to by the late Dr. John Brown in his essay on Nearness of the Nose, was of no service, when, attending at a duel, he allowed a wounded officer to die, because he could not even temporarily arrest bleeding from the femoral artery.

Some of the witnesses before the Commission admit that the Faculty examinations are thoroughly practical, and yet the witnesses are not happy. If the Faculty pass a supposed incompetent man it is trumpeted everywhere; if the Faculty reject a large number of candidates—Oh! it is because all the candidates are inferior men. Were the insinuations about the licentiates of the Faculty well founded, or the alleged facts numerous, we might expect a proportion of the sick population to be found, in the language of the æsthetic Miss Tippins, "murdered in their beds" every year. On the contrary, in cases of medical immorality and mal-praxis during the last twenty years, Faculty licentiates are conspicuous by their absence. The working and results of an institution should be the test of its usefulness. It cannot be denied that the licentiates of the Faculty compete successfully in life with the diplomates of other corporations, and that the ordinary meetings of the Faculty of Physicians and Surgeons, its reading-room, and large consulting and lending library, and the examinations of candidates for its licence, tend to the advancement of medical education, and the continuance of men of light and leading in the West of Scotland. By impoverishing the provinces, centralization may have weak points in medical government, as well as in general politics.

You wax warm on the delicate reference to doctors for country districts; but it will surely be conceded that a general practitioner may be fairly educated for all the usual requirements of these districts, and not be a specialist on the eyes, the ears, or the feet. He may be thankful, moreover, for five shilling fees, where his big city brother, a University professor or infirmary teacher, would look askance at any sum less than a guinea. I am, Sir, yours respectfully,

October 27th, 1882. W.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

THE study of natural history has always, I might say, presented attractions for northern minds. I need in confirmation of this only mention the names of some of our local students, whose names are known far and wide, to naturalists—viz., the Hancocks, Alders, Bradys, Abbs, Matthey, and others. Owing to the generosity of Sir William and Lady Armstrong the Natural History Society have been enabled to alter the plans for the new museum here, so as to bring it more in accordance with the original designs of the architect. It was intended that there should be a corridor on the east and west sides of the building as it at present stands, but as this would entail an outlay of about £10,000, the Society were obliged to abandon that portion of the plans. It was felt that something should be done to give the exterior of the building a more attractive appearance, but the Society lacked the necessary funds. A short while ago, however, Sir William and Lady Armstrong made the handsome offer of the money necessary to build a corridor seventeen feet wide down the east side, and also a wing on each side of the south end. The corridor will be provided with large ornamental windows, and it will be a very handsome elevation. This extension will, doubtless, improve the appearance of the building considerably, which promises to be an ornament—in an architectural point of view—to the north end of our city. In the wings to be constructed will be cloak, microscopical, and other rooms. The corridor and two wings will mean an expenditure of over

£6000, a very handsome gift; but when these are added to the main building, the museum, as originally designed, will not be complete, for the corridor on the west elevation will remain to be added. The Society will be content to wait a while for this corridor. Their chief difficulty at present is the raising of the £2000 yet required to pay for the erection of what may be called the main building, which cost £32,000. Adding to this the amount that will be given by Sir William and Lady Armstrong, the building, according to present plans, will cost over £38,000. Mr. Hancock's own collection of birds quite fill up the largest room. The main building is expected to be opened in the spring.

Dr. Embleton has kindly sent me a reprint of his address, delivered to the Northumberland and Durham Medical Society, on "Vivisection and Anti-vivisection," in which he cites numerous authorities from all countries, and almost all ages, showing the necessity for properly conducted experiments on animals, and asks "that the present restrictions on vivisection ought at least to be relaxed, so as not to banish the study of physiology from the country." Of anyone reading this masterly address of Dr. Embleton and remaining an anti-vivisectionist, perhaps the best thing to say is, "Pity the poor blind."

The committee of the Ladies' Ambulance Classes, held in the infirmary last winter, after paying all expenses, have devoted a surplus in a way at once grateful to the house authorities and useful to the inmates, by presenting two merlin chairs for the use of the patients.

It is often said that in the course of building improvements and alterations in the streets of large towns, the poor, however they may ultimately benefit, are at first great sufferers. There is a case in point in our own city at the present time, which should excite some attention. The Hospital of the Holy Jesus is an old foundation for the reception of decayed freemen, or their widows, and will accommodate about forty inmates; they have, besides comfortable quarters in the hospital, coals and other allowances. It was one of the few pleasant places to look at in the ancient part of the town, with its nice bit of grass in front of the quaint building, and the old people toddling about the colonnade, or sitting in the shade and watching the North trains whirl past near, but not too near to be an annoyance. Now all this, or most of this, is changed. Our authorities decided to make a new street, and as yet it is not very clear where it is to lead to, or that it was wanted at all; but at all events they have run the street through the hospital grounds, right in front of the building, cutting up the grass-plot, and obstructing the light and air of these poor people with a hideously ugly iron viaduct. Suppose this new street—contrary to the rule here with some Corporation improvements—fulfils the purpose for which it is intended, these poor old people will be further annoyed with the traffic and other disturbances of a great thoroughfare, instead of the quiet and rest befitting the aged, and evidently intended for them by the founders of this ancient asylum. The corporation is, I believe, the legal guardian of this hospital, and, if it became necessary to obstruct the light and air by this new street construction, it should have removed the hospital, or provided equivalent quarters suitable for the inmates.

The Gateshead Dispensary has, I am glad to see, received a bequest of £500 under the will of the late Alderman Hewitt of that borough. This institution well deserves any support it receives, as it is one of the best managed medical institutions in the North. Some of its house-surgeons have become our most prominent practitioners. This is not to be wondered at, considering the great scope this charity has for its operations. I was speaking to a gentleman the other day who told me that in his early days the population did not exceed 15,000. I believe that at the present time it will not fall much short of 70 000. Some of our merchant princes prefer to have their villa residences in the suburbs of Gateshead, and this is not to be wondered at by anyone who drives along the Durham-road from Gateshead to the Low Fell. The situation is exceedingly beautiful, with the slope of the Team Valley on one side and the wooded hills of Ravensworth, with its embattled castle, on the other, with the Team and Tyne glistening between.

Yesterday was our Hospital Sunday, and as the weather was all that could be expected, or, indeed, desired for the season, we look forward hopefully to an augmented collection.

Newcastle-on-Tyne, Oct. 30th, 1882.

SCOTTISH NOTES.

(From our own Correspondent.)

THE appointment of Dr. Alex. Ogston to the chair of Surgery in the Aberdeen University was formally announced a few days ago; but as it had been known for some time that the choice had been virtually made, little curiosity regarding the question remained. Judging from past experience concerning Dr. Ogston, the university may be congratulated on the Home Secretary's choice; and it is sincerely to be hoped that his enthusiasm and success as a teacher may rival the genuine fame he has already secured as a scientific and original surgeon. Perhaps the best evidence afforded of Dr. Ogston's fitness for the office is the fact, for which I can vouch, that two distinguished surgeons, who in other circumstances would have been candidates, declined chiefly because they would not compete with Dr. Ogston. Dr. Alex. Ogston is son of the venerable professor of Medical Jurisprudence at Aberdeen, and his brother is assistant-professor of the same subject.

Dr. William McIntosh, F.R.S., was on Saturday last formally installed as Professor of Natural History at St. Andrews. Principal Shairp presided. Professor McIntosh was cordially received by the other professors.

In the introductory lectures to the various courses at the universities several of the professors have this year, and chiefly incidentally, had something to say on the vivisection discussion. It is to the ordinary voter that appeal must finally be made on this as on other questions which are ultimately settled by Parliament, and when the question is calmly discussed with the intelligent citizen there is seldom any but a satisfactory result. The chief danger is that, not the intelligence of the many, but the enthusiastic bigotry of a few active and astute wire-pullers may ultimately decide how science may in future be retarded, and its devotees held up to public scorn. There are many well-educated people who have no accurate acquaintance with the merits of the matter; and without guidance from responsible men, it is not surprising that the floods of anti-vivisection literature, containing statements of the most revolting kind, should bias the judgment of sympathetic natures. Such weighty words as those uttered by Professors Rutherford, Chiene, and Clelland, the former of whom showed the large sacrifice made by the University of Edinburgh, in the interest of truth, in refusing a large sum offered on condition that experiments on living animals should be prohibited, must have a good effect on unbiased minds; while the prominence given to the remarks by the leading Scottish newspapers is a gratifying evidence of good will.

What has been called the Dunecht mystery has been but partially solved by the conviction of one of the perpetrators, and his sentence to five years' penal servitude. No certainty is felt as to the manner of the outrage; but it is believed that more than one person was engaged in the removal of Lord Crawford's body from the family vault. There has been no such case tried in Scotland since the passing of the Anatomy Act.

The Dundee Naturalists' Society, of which Dr. Rorie is the very active President, gave last week a most successful conversazione in the spacious rooms of the Albert Institute. Over a thousand guests were present, and the greatest interest was manifested in the many scientific specimens and novelties exhibited. Mr. P. Geddes, F.R.S.Ed., gave a short discourse on "Some Results of the Study of Biology"; and Colonel Drummond-Hay, a distinguished local ornithologist, lectured on his favourite subject. Altogether the scientific as well as the social success of the meeting must have afforded Dr. Rorie and the useful society over which he presides great satisfaction, and was another proof of the awakening interest in science now so frequently observed on the part of the public generally.

Epidemics of typhoid fever are reported from Kilbirnie and Grangemouth. In the former place about thirty-three cases have occurred, the disease has spread somewhat rapidly, and several deaths have been occasioned. At Grangemouth the outbreak has been traced to a dairy where a case had occurred; several families taking their milk from this source have been attacked; and the whole circumstances have been reported to the Board of Supervision for their advice and that of Dr. Littlejohn. In the meantime an

order has been issued prohibiting the further use of the infected milk till the fever case is removed and thorough disinfection carried out.

HYPNOTISM IN PARIS.

(From an occasional Correspondent.)

No. IV.

THE difference between M. Donato's performances and the experiments of Drs. Charcot and Dumontpallier is this: the subjects for experiment by the latter gentlemen were exclusively female patients more or less hysterical, and those exhibited by M. Donato were almost exclusively young men presumably healthy. This fact, he says, shows the greater magnetic power he possessed over those who experimented on females only; and if he had a subject of the fair sex who accompanied him in all his performances, it was for the sake of convenience, so as to have a subject always at hand. M. Donato's subjects should, according to his own admission, be naturally very sensitive to the magnetic influence, or they should, at any rate, go through some preparation, or rather training, before they could be considered fit subjects. Would this of itself not imply a certain degree of *compérage?* As far as I have seen, the young men are a pale, nervous, delicate-looking set, and are generally shopmen or clerks; and they are always, or nearly always, the same subjects who go through these demonstrations. I have seen them not only go through all the feats described by M. Charcot with his female subjects, but they seemed to be entirely under the influence of his will—so much so, he had only to will certain things and he was implicitly obeyed without even touching his subjects. For instance, he prevented them, while in the magnetic state, from opening their eyes or their mouth, or from speaking in an audible tone, rising when once on their knees, or from giving a blow with the fist while the arm was placed in such an attitude, notwithstanding the strenuous efforts made by the subjects to put these acts into execution. But what is most wonderful is the magnetiser could get them to do certain things which are directly opposed to his verbal injunctions, but are strictly in accordance with his will. Thus, in spite of the repeated orders, which he delivers in the most imperative manner, to open their eyes, their mouth, to pronounce words suggested by their magnetiser, they do just the reverse, and remain silent simply because he wills it inwardly. In some cases, if the subject is magnetised in the midst of a song, he suddenly stops, and resumes it when he is awakened, just at the phrase or the portion of the word where he had left off. Even the special senses are in the power of the magnetiser, which he can alter at pleasure. For instance, one of the subjects magnetised thought he was enjoying an apple while he was eating a raw potato. The mental faculties of the subject are not less under the control of the magnetiser, for he suspends his memory at will, the subject forgets the most common circumstances and the names of articles of every-day life; indeed, he forgets his own name and even the sex he belongs to. Fortunately, this "lapsus memoriæ" lasts only during the magnetic sleep, from which he is roused by a slight whiff in his face. What will partisans of cerebral localisation say to this, and what will pathologists say when they are informed that phenomena such as those described above, which are the result of certain diseased processes of the brain, all of which are of a complex nature and take time to effect their work, are here produced, cured, and reproduced in a few minutes and at the will and pleasure of a "magnetiser?" I ask whether such phenomena can be *bonâ fide*, even when produced by a man of science? It would seem naïve to put such a question, but when I think of the remarks that were made in my hearing at M. Donato's performances, and by men of science, who expressed their belief in the reality of what they had witnessed, and when one takes into consideration the amount of credit obtained for these pseudo-scientific representations through the medium of articles published on the subject in certain periodicals, it seems time that something should be done to expose the fallacy and danger of a doctrine according to which a magnetiser, expert in the art, could command at will the execution of any crime by a subject in the magnetic state. But truth will always prevail, and the impostures, misconstructions, and misrepresentations are, by the more discerning portion of the public, separated from it as the chaff is from the wheat.

This is what has happened to M. Donato's magnetic *séances*, which were found to be all "chaff," mixed up with a semblance of science, as was shown by a certain number of anti-magnetisers, who had got up opposition meetings. Among others, I may notice one convened by M. Carmelli, Professor of Mathematics at a Government College, who, finding his pupils so full of M. Donato's experiments on animal magnetism, which diverted them from their studies, determined to prove by practical demonstration that the whole affair, whether it be called animal magnetism or hypnotism, was a monstrous humbug. This the anti-magnetiser had not much difficulty in doing. The meeting was announced beforehand, and, of course, the hall was crowded. At the hour appointed M. Carmelli made his appearance in due form, in evening dress, and accompanied by a Mademoiselle Mariani, his "sujet de demonstration," as M. Donato had his, and who was named Mademoiselle Lucile. M. Carmelli began by assuring his audience that he had never been magnetised in his life, and, consequently, did not possess the mysterious agent called the magnetic fluid. He would, however, undertake to put Mademoiselle Mariani, who also had never been magnetised in her life, through the same processes that M. Donato's subject was in the habit of going through. After a few passes over the forehead and head, a few significant looks, and other manœuvres usually employed on such occasions, Mademoiselle Mariani fell off into a state of catalepsy. She was then placed on a chair, her body being as rigid as a corpse, with her eyes wide open and fixed, from which even the burning of a bundle of phosphorus matches under her nose did not rouse her; there was not a quiver in the muscles of the face, and she looked as white and as lifeless as a marble statue. To show how completely she was under his control the magnetiser roused her by a few passes, and then, by certain other passes, she fell back again into the cataleptic state. A medical man who was present observed that he had seen all this gone through at the Salpétrière except the burning of matches, which would be too vulgar a trick for that institution, and he thought that the subject herself, who looked highly hysterical, might have been a patient in that hospital. While in the cataleptic state her eyes were blindfolded, and she went through the usual tricks as cleverly as any somnambulist by profession. After a short rest and a few fresh passes she again fell off into a sleep. The magnetiser then drove a long pin through the fleshy part of the forearm, but she did not flinch, and not a drop of blood was seen oozing from the wound. She was then placed in the horizontal position between two chairs, her head resting on one and her feet on the other, with nothing to support her back. In this position the magnetiser sat, and even stood upright, on her, and she lay as inflexible as a board under the man's weight. This brought down a thunder of applause from the assembly, but it having been intimated to M. Carmelli that it was impossible for any person, not under the influence of magnetism, to go through such a feat as Mademoiselle Mariani had just gone through, he simply reminded his audience that it was a feat commonly performed by clowns at circuses and public fairs who certainly had no pretensions to magnetism, and in order to prove that neither somnambulism nor magnetism had anything to do with it, he proposed rousing his subject from her feigned sleep, and that without any passes or blowing on the head, or even touching her. By the simple word of command, "Mademoiselle, levez-vous," she showed signs of gradually coming to by first smiling, and then, stretching out her limbs, she sprang to her feet, and looked none the worse for all she had gone through.

He then explained the trick of passing long needles or pins through the arm without pain, and that it was not necessary to be magnetised to escape suffering, and, suiting the action to the word, he turned up his sleeve and passed a long pin through his own arm. He declared he felt no pain whatever, and invited anyone in the assembly to come forward and try the experiment for himself or herself. No one seemed inclined to attempt it until an old gentleman offered his services, and M. Carmelli put him through the same process as he had just gone through himself, the old gentleman also declaring that he felt no pain whatever. This was the acme of Carmelli's success, and before bringing the *séance* to a close he wished to impress upon the assembly that there

was no such thing as animal magnetism, that there was certainly an understanding between the magnetiser and magnetised, and that it required some dexterity in performing the tricks and the most scrutinising attention to detect them. As for the feat of thrusting a long needle or pin through the arm, it was a very common one, and the explanation given as to the painlessness and bloodlessness of the operation was that the parts generally selected were those barely supplied with nerves and bloodvessels of any size, as is the case with the upper and fleshy part of the forearm. Besides which, it is a fact well known to surgeons that the muscles are not endowed with great sensibility, and the only pain felt, if at all, would be in the skin, but this would be so slight that, coupled with the dexterity of the operation, the subject would hardly feel any. If the subject be hysterical this would still more favour the success of the feat, as the skin is generally insensitive in this condition; and this would explain how Mademoiselle Lucile bore the operation so well.

This amateur *séance* was most damaging to M. Donato, who was present, and just at the termination he stood up and, in a most frantic rage, denounced his adversary's experiments as unscientific and absurd. Whereupon an altercation took place not only between the principals but between their respective partisans. This, however, was soon put down, and at the breaking up of the meeting many of the audience left with the firm belief that M. Carmelli was a magnetiser *incognito*, or, at any rate, that he and his coadjutor possessed the fluid without being cognisant of the fact, or that they had some motive for not wishing to own it, as they both, Mademoiselle Mariani in particular, acted their part too well to have merely simulated. Be that as it may, M. Donato's glory from that day grew dim, and Mademoiselle Lucile began to find out that she had not been properly treated in the division of the profits accruing from the *séances* and as a natural sequence, she quarrelled with her *pro tempore* lord and master and denounced him as an impostor. Moreover, at an interview a journalist had with her she fully exposed M. Donato's tricks, and made some very interesting disclosures. Among other things she told her interviewer that at times she was rather refractory, and could not fall asleep. M. Donato then resorted to the expedient of dosing her with opium, which made her feel so drowsy and stupid that he used to pinch her to keep her awake till the proper time arrived. But there were times she was so sleepy from an overdose of opium that she could not be roused, and it was then that M. Donato had recourse to the young male subjects already referred to, who were regularly trained to go through the processes told off for them. She further avowed that if she had a choice in the matter she would, by a great way, prefer to have the pins thrust into the arm than be pinched as she was, as the latter operation caused her great pain, and her body was covered with boils in consequence. Nothing has been heard of M. Donato since these disclosures were made, and the rage for exhibitions such as he provided in Paris has consequently declined.

MEDICAL TRIALS.

THE BRIGHTON SEWERS BOARD AND THE HOVE COMMISSIONERS.

MR. A. MARTINEAU, the Sussex County Court Judge, sat at the Brighton Town Hall, on the 25th ult., with Mr. James Abernethy, President of the Institute of Civil Engineers, as assessor, in obedience to a mandamus from the Court of Queen's Bench, and under the 73rd Section of the Brighton Intercepting and Outfall Sewers Act, 1870, to hold an inquiry into a dispute between the Sewers Board and the Hove Commissioners. The sewer, the construction of which was begun in 1870, is over seven miles in length, commences on the sea front at Hove-street, Hove, runs along the coast line through Brighton, and discharges itself into the sea at Portobello, about four miles east of Brighton. It intercepts on the line of route and receives the contents of all the sewers in Hove and Brighton, which formerly discharged direct into the sea in front of the two towns at seven different points. The Sewers Board contend that under the Act the two local authorities, the Brighton Town Council and the Hove Commissioners, were bound to convert the old sewer ends into storm outfalls, to relieve the sewer in time of flood. Brighton converted the whole of the outfall in the Council's jurisdiction, and the Sewers Board now seek to compel Hove to provide outfalls, three of the outfalls in that district having been removed and converted, so that it does not act as an outfall until the water in the ordinary sewers is 5ft. 6in. above the crown of the intercepting sewer. The Hove Commissioners held that the intercepting sewer was constructed for both storm and sewage water, that they were permitted to remove the old sewers by the report of the Board's engineer, Sir John Hawkshaw, and that they cannot be called upon to provide new outfalls. Both Brighton and Hove contribute to the cost and maintenance of the intercepting sewers according to their respective rateable values, and the Commissioners of the latter town contend that if new outfalls are needed in their district they should be constructed at the cost of the common fund.

The hearing of the inquiry was adjourned, and resumed on the 31st ult., when Mr. Cohen addressed the Court on behalf of the Hove Commissioners. He contended that the sewer was constructed for both sewage and storm water, that it was the duty of the Sewers Board, which issued precepts on both the Brighton Town Council and the Hove Commissioners, to construct outfalls if such were found to be necessary, and that the local authority of the Hove district could not, under the Sewers Board Act of 1870, be called upon to carry out the work. Evidence having been taken as to the state of the old sewers at the time of the completion of the intercepting sewers, Mr. Finlay, Q.C., replied on behalf of the Sewers Board, and the Court rose. The Judge will give his decision on the questions of law on November 21st, and in the event of his deciding against the Hove Commissioners, evidence will then be taken as to the work necessary to be carried out.

IMPORTANT TO MEDICAL OFFICERS.

GRUBB *v.* THE CHESTERTON BOARD OF GUARDIANS.

AT the Cambridge County Court on the 27th ult. the Judge, Mr. Bagshawe, Q.C., gave his judgment in the above case. The plaintiff, Mr. J. S. Grubb, resides at Waterbeach, Cambridgeshire, and is one of the medical officers of the Union, residing at that place. He brought an action against the guardians for the recovery of £3 3*s.* 6*d.*, being 3*s.* 6*d.* for the supply of a truss to a pauper, named Brewer, and £3 for the setting of the leg of a pauper, an old woman named Pearson. As the old woman was a permanent pauper, and the case, in the opinion of the guardians, not an urgent one, the claim was resisted. The leg, it appeared, had been set temporarily by Mr. Bridger, surgeon, Cottenham, and was a case, it was said, for the hospital. His Honour dealt with the larger claim, £3 for treating the woman Pearson for a fractured leg. The pauper held a ticket for permanent relief, and while that ticket was running the woman broke her leg. This was at Cottenham, and the woman was temporarily attended to by Mr. Bridger. On her way in a cart to Landbeach, her home, they met Dr. Grubb. His Honour was satisfied that the woman was not intercepted on her way to the hospital. Dr. Grubb attended the woman and re-set the leg. He sent in his claim for such attendance, but it was suggested that he could not recover, as he did not get a further order as required. The terms of the existing order being without qualification he took to be sufficient. He relied upon Article 76 of the Consolidated Orders, which stated that upon the exhibition of a ticket such person was entitled to receive relief in sickness. He also quoted Article 206, defining the duties of medical officers, amongst which it was stated that upon application made on behalf of the party to whom a ticket was given the medical officer would be bound to supply as if he had received an order from the guardians. In that, there was not a word suggesting that the plaintiff was bound to get any further order. The guardians could not make the woman go to the hospital. It was not the duty of the medical officer to provide extra facilities. Article 177 of the General Consolidated Orders settled the point as to plaintiff's remuneration, namely—£3 for setting the leg. His Honour was at a loss to discover any reason why plaintiff should not be paid and allowed the £3 and costs, the 3*s.* 6*d.* being abandoned. Witnesses were allowed.

MEDICAL NOTES IN PARLIAMENT.

Treatment of the Sick and Wounded in Egypt.

ON Thursday, 26th ult., Mr. Chaplin gave notice in the House of Commons that on an early day he would "call attention to the condition and treatment of the sick and wounded in Egypt and on the journey home, and the unnecessary sufferings which they have undergone"; and that he would move a resolution.

Vaccination Questions.

On Friday, Mr. Hopwood gave notice "To ask the President to the Local Government Board whether he has received further and complete information, through the Foreign Office, from the French Government, on the subject of the infection of fifty-eight soldiers of the 4th Zouave Regiment, to whom it is alleged that syphilis was communicated by vaccination with matter from Arab children."

On Tuesday, in reply to Mr. Taylor, Mr. Dodson stated that he expected the report on the Norwich vaccination inquiry would be printed within a fortnight.

The Artisans' Dwellings Acts.

Sir J. McGarel Hogg, in answer to Sir R. Cross, stated on Friday that the Metropolitan Board of Works had given instructions for the preparation of draft schemes under these Acts, with regard to four areas situated in Lambeth, St. George's-in-the-East, Limehouse, and Greenwich respectively. These schemes would come before the Home Secretary for his approval, and if that were obtained they would be submitted to Parliament next session.

The Army Medical Department in Egypt.

On Friday, Mr. Childers, in answer to Mr. Fitzpatrick, on behalf of Colonel Milne Home, expressed his regret that Colonel Home, whose gallantry in Egypt was so marked, should have assumed that his medical comrades were guilty of maladministration, instead of asking whether the allegations against some of them would be inquired into. Without admitting the accuracy of the complaints, some of which had been shown to be greatly exaggerated, and others altogether unfounded, he had arranged to defer them to a departmental committee. The Committee was originally appointed in the summer to inquire into the organisation of the Army Hospital Corps, and the reference to it would now be so enlarged as to include all hospital arrangements in the field and on board ship. The right hon. gentleman added that he thought he ought to state, in justice to the medical department, that Sir Garnet Wolseley had greatly praised the medical officers generally in Egypt.

On Monday, in response to an appeal from Mr. Carington, Mr. Childers declined to advise the appointment of a Select Committee or a Royal Commission to deal with this departmental question, for action upon which he was responsible. He was aware of the interests on behalf of which the question was asked, but the committee he had appointed was sufficiently strong to act fairly to all concerned. Surgeon-General Hanbury had not asked for a court of inquiry, but had expressed a wish for the fullest investigation of the complaints made against his officers by certain correspondents. Of course the committee would have the advantage of the evidence of these gentlemen. The right hon. gentleman said he was aware of the pressure which was being used. Strong pressure from different directions had been put upon himself.

On Tuesday, Mr. Gourley asked if there was any foundation for the allegation that the medical service necessary for the proper treatment of the sick and wounded brought home on board Her Majesty's ship *Malabar* was insufficient.—Mr. Childers replied that the committee presided over by Lord Morley would minutely investigate the allegations as to the treatment of the sick and wounded on board the *Malabar* and other ships on which they embarked, and he preferred not to prejudge the committee's report. With regard to the inquiry why what his hon. friend considered an inefficient medical force was sent with the expedition, the whole of that question would come before the committee; but he was bound to say that beyond dispute no military expedition ever left this country with anything like the same proportionate strength of medical officers and attendants. The number of medical officers actually embarked from England, not including India, was 163, besides thirteen who would have left had not the additional drafts been stopped. The numbers of the Army Hospital Corps were eighteen officers and warrant officers, and 817 non-commissioned officers and men, and in addition twenty nine nursing sisters were sent by the War Department. Of course, he did not include sisters of mercy or nurses sent by private societies of whom the War Office had no knowledge. After considering the suggestions made to him as to enlarging the committee, he had come to the conclusion that, without in any way qualifying his absolute responsibility in the matter, he might make an addition to the committee. He accordingly asked Sir R. Lloyd Lindsay if he was willing to give the benefit of his assistance. He was happy to say that Sir Robert had consented, and the first meeting of the committee would take place to-morrow (Wednesday).

Royal Irish Constabulary.

In answer to Mr. W. Corbet, Mr. Trevelyan said that members of the Royal Irish Constabulary did not pay anything for medical attendance. Complaints were made by the men of the Arklow Division, through the chief inspector, against the medical attendance. Careful inquiry was made by the county inspector, who found the complaints much exaggerated. The removal of the head constable had no connexion with the complaints. Mr. Corbet subsequently gave notice that he will ask the Chief Secretary other questions in reference to the matter.

Phosphate of Potash.

Mr. O'Kelly gave notice that he would ask the President of the Board of Trade whether his attention has been called to a pamphlet written by Dr. Robert Galloway of Dublin on the use of phosphate of potash as an antiscorbutic; and if so, whether he will take steps to have its value as a preventive agent properly tested.

The Murder of Dr. Maclean.

On Wednesday, Dr. Cameron gave notice that he would ask the Under Secretary of State for Foreign Affairs whether anything definite has yet been done in the way of advancing or securing a settlement of the claim against the Chilian Government for compensation for the murder of Dr. Maclean, the physician to the British Legation, by Chilian soldiery, at Chorillos, in January last.

Vaccination of Zouaves.

In answer to the question of Mr. Hopwood, of which notice had been given on Friday (*see supra*), Mr. Dodson said: My answer to the question is that we have not succeeded in obtaining any fresh information upon the subject, and it does not appear that the French Government have any in their possession. With regard to the alleged fact that the disease referred to was communicated by vaccine matter, I am advised that the statement that two children served as vaccinifers for 280 men, and that fifty-eight of these men were operated upon by lymph taken from one single child, is opposed to all experience in vaccination. So far from admitting the fact that this disease was communicated by vaccine matter, I cannot entertain the slightest doubt that such was not the case, more especially as it is expressly mentioned that the children from whom the lymph was said to have been taken were in excellent health.

The Medical Acts.

Sir T. Lawrence asked the Vice President of the Council whether it was his intention to introduce a Bill to carry out the recommendations of the Royal Commission on the Medical Acts; and if so, when. Mr. Mundella said the report of the Medical Commission was at present under consideration, but the department had not arrived at such a stage in their deliberations as to enable him to state what course they proposed to pursue.

The Contagious Diseases Acts in Cairo.

Mr. Pease asked the Under Secretary of State for Foreign Affairs, whether his attention had been called to the following paragraph in the *Daily News*:—"The first attempt of the Council of Public Health, composed of Europeans and traders, to introduce the Contagious Diseases Act into Cairo is already a great success."—Sir C. Dilke said the Foreign Office had no information whatever upon the subject. They had heard nothing of it, and they were unaware of the existence of a body called the Council of Public Health.

The War Office Committee.

Mr. Fort asked the Secretary of State for War whether, seeing that Sir W. Mends holds the office of Director of Transports, Mr. Thomas Crawford that of Director-General

of the Army Medical Department, and Mr. George Lawson that of Assistant Director of Supplies and Transports, and are thus all officially connected with the Departments which are alleged to have failed in properly carrying out their duties during the late war, it would not be more satisfactory if they appeared as witnesses before, rather than as members of a committee appointed to inquire into matters so intimately connected with their own departments; and whether he is aware that there is a feeling abroad that before a committee thus constituted subordinate officers of the Transport and Medical Departments would be unlikely to give the requisite evidence.—Mr. Childers said the main object of the committee was to improve the arrangements of the transport service. No one was more fitted to take part in that work than Dr. Crawford, who had recently returned from India, and the other gentleman named. As to the last part of the question, he could not conceive that any such feeling could exist, inasmuch as the subordinates of the different departments would naturally look to their chiefs to secure them fair play when any attacks were made upon them. Mr. W. H. Smith asked if there were really any charges of failure against either of the departments Mr. Childers said charges against the transport and medical departments had been made in the newspapers, but he did not attach much importance to them.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Oct. 26th:—

Benham, Frederick Lucas, M.D. Lond., Notting-hill.
Edwardes, Edward Joshua, M.B. Lond., York-street.
Oliver, Thomas, M.D. Giss., Newcastle-on-Tyne.
Oxley, Alfred Jas. Rice, M.B. Dub., Junior Oxfd. and Camb. Club.

On the same day the following gentlemen were admitted Licentiates of the College:—

Abrath, Gustav Adolph, M.C. Heidelberg, Sunderland.
Adkins, George, London Hospital.
Beattie, Henry, jun., Albert square.
Birch, Henry Priestley, Harley-street.
Birt, Cecil, Wadsley, Sheffield.
Bolden, Frederick James, South Australia.
Crick, William Throne, Fentiman-road.
Dale, Walter Frederick, London Hospital.
Dequé, Laurent, St. Mary's Hospital.
Dixon, Henry Charles, Portinscale-road.
Dun, Walter Angus, M.D. Miami, Queen-street, Cheapside.
Howard, Robert Jared Bliss, M.D. McGill Coll., Guildford-street.
Hull, Walter, Swallow-place.
John, David, Swansea.
Khan, Mohamed Ismail, Montague-place.
Massey, Henry Massey, Peckham-road.
Myles, James Perceval, St. Mathias Vicarage, Bristol.
Paniety, John Emanuel, Green-street.
Penn, John Evans, Cumberland-terrace.
Powell, John James, jun., Heathlands, Weybridge.
Robinson, Frederick Gardner, Pendleton, Manchester.
Sinclair, John, Queen Adelaide's Dispensary, Bethnal-green.
Skipper, Edward, University College Hospital.
Stead, Geoffery, Birmingham.
Thane, Philip Thornton, Montague-street.
Tripp, Charles Llewellyn Howard, Royal Free Hospital.
Williams, Edward Richard, St. Bartholomew's Hospital.
Wise, Charles Henry, Westminster Hospital.
Wöhrnitz, Ferdinand Broer Mathieu, Albert-street.

The following gentlemen passed the Second Examination for the Licence:—

Beatty, Joseph Beasley Higginson.
Birch, Charles Ormond.
Crosse, Hammond William Rufus Richardson.
Power, Henry D'Arcy.
Uppleby, John George, Richmond-road.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October meeting of the Examiners the following gentlemen passed the Primary Examination for the Double Qualification:—

L. M. Dunlop, M.A., Glasgow. | John Mackie, Aberdeen.

Four candidates were remitted.

The following gentlemen passed the Final Examination, and were admitted Licentiates of both Colleges:—

F. V. Adams, Glasgow. | Sheridan Dean, Glasgow.

Four candidates were remitted.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October meeting of the Examiners the following gentlemen passed the First Professional Examination of the Faculty:—

L. P. Banks, London Hospital.
A. C. Boothman, Glasgow School.
G. Hunter, Glasgow School.
D. Jamison, Belfast.
G. G. Jones, University Coll.
J. Mason, Glasgow School.
W. Somerville, Glasgow School.
A. A. Pulton, Glasgow School.

Ten candidates were remitted.

The following gentlemen passed the Final Examination, and were admitted Licentiates:—

J. H. Blayney, Manchester.
A. Dickson, Glasgow.
W. Dunlop, Glasgow.
L. Eminson, Messingham.
W. Gibb, Glasgow.
G. Hunter, Glasgow.
E. Kauffmann, Michigan, U.S.
A. M'Ausland, Glasgow.
A. L. Macphail, Glasgow.
John Mathie, Glasgow.
A. D. Naismith, M.D., Toronto.
N. N. Parakh, Bombay.
James Wilson, Glasgow.

Twelve candidates were remitted.

ROYAL UNIVERSITY OF IRELAND.—The following obtained Honours at the autumn examinations in the Faculty of Medicine:—

M.D. DEGREE EXAMINATION.—First Class Honours: Chas. H. Wise. Second Class Honours: J. M'Murray, F. E. Adams.
M.B. DEGREE EXAMINATION.—Upper Pass Division: John Riordan.
SECOND EXAMINATION IN MEDICINE (EXHIBITIONS).—First Class, £40: Benjamin Hoeford. Second Class, £30: Thomas Grainger, John Kearney, R. B. Gorsuch. First Class Honours: James Chambers, Benjamin Hoeford. Second Class Honours: Thomas Grainger, John Kearney, R. B. Gorsuch, James Norwood.
FIRST EXAMINATION IN MEDICINE (EXHIBITIONS).—Second Class, £15: T. R. Leonard. First Class Honours: J. W. Wilson, T. D. Smyth. Second Class Honours: T. R. Leonard, W. B. M'Quitty.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 26th:—

Bassett-Smith, Percy William, Alexandra-road.
Wildey, Alex. Gascoigne, Dunbar House, Southsea.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Alfred Kirby, Middlesex Hospital; H. Anderson Sheppard, Charing-cross Hospital; Walter Reginald Tuckett, London Hospital.

THE LATE DR. YEATES.—The monumental tombstone provided by public subscription in memory of the late Dr. Yeates, who died at Walthamstow in February last, has been placed over his grave.

OWENS COLLEGE.—The Dauntesy Entrance Scholarship, value £100, has been divided between Nathan Charles Haring and Charles Frederick Marshall, who were bracketed equal.

THE Bishop of Liverpool preached the annual sermon in aid of the Derbyshire General Infirmary, at All Saints Church, Derby, on the 26th ult. The Mayor and members of the Town Council attended the service. The collection amounted to £208.

CAMBRIDGE UNIVERSITY.—At a congregation held on the 27th ult., Mr. G. E. Wherry, of Downing College, was approved as a University teacher of Practical Surgery. The report, dated October 16th, 1882, of the Council of the Senate, recommending that a sum of £300 be placed at the disposal of the Board of Biological and Geological Studies for the purpose of providing additional teaching for the classes in Morphology during the current academical year, has been confirmed.

DONCASTER INFIRMARY.—The report read at the annual meeting of governors and friends of this hospital held last week stated that the number of in-patients was 159, and of out patients, 2348. The annual subscriptions had not decreased, but this branch of income was becoming a source of anxiety. The total receipts for the year were £1721 9*s.* 8*d.*, being £147 12*s.* 9*d.* more than last year. The total ordinary expenditure was £1561 17*s.* 11*d.* The balance due to the treasurer was £47 1*s.* 10*d.* The Infirmary Sunday collections had yielded £209 5*s.* 6*d.*, and the Saturday collections £236 7*s.* 9*d.*, compared with £214 18*s.* 1*d.* in 1881.

DR. E. H. BYRNE, OF DUBLIN.—The Dublin South City Dispensary Committee, at a meeting held on October 24th, passed the following resolution in reference to this gentleman, who is about to go to Australia:—"That the South City Dispensary Committee, having received the resignation of Dr. E. H. Byrne as medical officer of High-street Dispensary, beg to express their high sense of the manner in which he has discharged his duties, and their high opinion of his professional services, and the great kindness and attention he has given to the poor under his charge; and they wish him every success in future, and much regret the loss of his services."

BOOKS ETC. RECEIVED.

ASSELIN ET CIE, Paris.

Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris. Tome XVII. pp. 387–180.

BAILLIÈRE, J. B., ET FILS, Paris.

Nouveau Dictionnaire de Médecine et Chirurgie Pratiques. Tome trente-troisième.

Les Hystériques. Par le Dr. Legrand Du Saulle. pp. 625.

Leçons Cliniques sur les Maladies Mentales, et sur les Maladies Nerveuses, professées à la Salpêtrière. Par le Dr. Auguste Voisin. pp. 770, avec Photographies, Planches, Lithographiées, et Figures.

BAILLIÈRE, TINDALL, & COX, London.

Politzer's Text-book of the Diseases of the Ear and Adjacent Organs. Translated and Edited by J. P. Cassells, M.D., M.R.C.S. pp. 800, with 257 Original Illustrations.

Whooping-cough, its Pathology and Treatment. The Fothergillian Prize Essay. By Thos. M. Dolan, F.R.C.S.Ed. pp. 108.

A Guide to the Examinations of the Apothecaries' Society of London. By W. E. Dawson, L.S.A.Lond. pp. 68.

Stable Management and the Prevention of Disease among Horses in India. By J. J. Meyrick, F.R.C.V.S. pp. 91.

An Essay on the Breeding and Management of Draught Horses. By R. S. Reynolds, M.R.C.V.S. pp. 104.

BELL & BRADFUTE, Edinburgh.

Medical Diagnosis: a Manual of Clinical Methods. By J. Graham Brown, M.D. pp. 331.

CHURCHILL, J. & A., London.

Regional Surgery, including Surgical Diagnosis. A Manual for the Use of Students. Part I.: The Head and Neck. By F. A. Southam, M.A., M.B.Oxon., F.R.C.S.Eng. pp. 229.

Diet for the Sick. By J. James Ridge, M.D. Second Edition. pp. 54.

The Contagiousness of Pulmonary Consumption and its Antiseptic Treatment. By J. Burney Yeo, M.D. pp. 124.

Some Practical Observations on Vaccination. By W. H. W. Wilkinson, L.R.C.P.Lond. pp. 40.

A Supplementary Catalogue of the Pathological Museum of St. George's Hospital. By Isambard Owen, M.D. pp. 284.

The Chamberlens and the Midwifery Forceps. By J. H. Aveling, M.D., F.S.A. pp. 231.

Elements of Dental Materia Medica and Therapeutics, with Pharmacopœia. By James Stocken, L.D.S.Eng.; assisted by Thos. Gaddes, L.D.S.Eng. & Edin. Third Edition, pp. 400.

CORNISH, J. E., Manchester. SMITH, ELDER, & Co., London.

The Frog: an Introduction to Anatomy and Histology. (The Owens College Course of Elementary Biology. Part I.) By A. M. Marshall, M.D., D.Sc., &c.

CUSHINGS & BAILEY, Baltimore.

The Physician Himself, and what he should add to his Scientific Acquirements. By D. W. Cathell, M.D. Second Edition, carefully Revised. pp. 208.

GRIFFIN (CHARLES) & Co., London.

The Teeth, and how to Preserve them and Prevent their Decay. By S. H. Linn, M.D., D.D.S. pp. 74, with Plates and Diagrams.

GRIFFITH & FARRAN, London.

Ambulance Lectures. By L. A. Weatherly, M.D. pp. 87, Illustrated.

HIRSCHWALD, A., Berlin.

Die Electricität in ihrer Anwendung auf Practische Medicin. Von Dr. Moritz Meyer. pp. 632.

JANSEN, MCCLURG, & Co., Chicago.

Essentials of Vaccination. By W. A. Hardaway, M.D. pp. 146.

JOHNSTON, W. & A. K., Edinburgh.

The Botanical Atlas. By D. McAlpine, F.G.S. Part VII.

LONGMANS, GREEN, & Co., London.

Memoir of Augustus De Morgan. By his Wife, Sophia Elizabeth De Morgan. With Selections from his Letters. pp. 422.

A Dictionary of Medicine, including General Pathology, General Therapeutics, Hygiene, and the Diseases Peculiar to Women and Children. By various Writers. Edited by Richard Quain, M.D., F.R.S. pp. 1816, with Illustrations.

The Pathology, Diagnosis, and Treatment of the Diseases of Women. By Graily Hewitt, M.D.Lond., F.R.C.P. Fourth Edition, Revised, Enlarged, and in great part Rewritten. pp. 908, with numerous Illustrations.

LONGMANS & Co., J. MURRAY, MACMILLAN & Co., SIMPKIN, MARSHALL, & Co., TRÜBNER & Co., E. STANFORD, J. D. POTTER, KEGAN PAUL & Co., London; A. & C. BLACK, and DOUGLAS & FOULIS, Edinburgh; A. THOM & Co., and HODGES, FIGGIS, & Co., Dublin.

Report on the Scientific Results of the Voyage of H.M.S. *Challenger* during 1873–76, under the Command of Captains Nares and Thomson. Prepared under the superintendence of Sir C. Wyville Thomson, F.R.S. Vol. V.: Zoology.

MASSON, G., Paris.

L'Etude et les Progrès de l'Hygiène en France de 1878 à 1882. Par MM. Napias et A. J. Martin. Avec une Préface par M. le Prof. Brouardel. pp. 545, avec 229 Figures.

PUTNAM'S SONS, New York.

Cerebral Hyperæmia, does it exist? By C. F. Bulkley, M.D. pp. 129.

SMITH, ELDER, & Co., London.

First Aid to the Injured. Five Ambulance Lectures by Dr. F. Esmarch. Translated from the German by H.R.H. Princess Christian. pp. 100, Illustrated.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M.D., F.R.C.P. In 2 Volumes. Fourth Edition. pp. 405–418. Illustrated.

A Treatise on the Theory and Practice of Medicine. By John Syer Bristowe, M.D.Lond., F.R.S. Fourth Edition. pp. 1213, with Illustrations.

Human Morphology; a Treatise on Practical and Applied Anatomy. By H. A. Reeves, F.R.C.S.Ed. Vol. I.: The Limbs and Perineum. pp. 719, with 564 Illustrations.

WASHINGTON GOVERNMENT PRINTING OFFICE.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. III.: Cholecyanin—Dzondi. pp. 1020.

MACLEHOSE, J., & SONS, Glasgow.

Lectures on Medical Nursing, delivered in the Royal Infirmary, Glasgow. By J. Wallace Anderson, M.D. pp. 224.

Transactions of the American Otological Society.—Index Medicus, Vol. IV., No. 8.—Thomas's Operation (Laparo-elytrotomy); by H. E. Beckwith, M.D.—Infectionskrankheiten in Japan; von Dr. Erwin Baelz.—Stricture of the Rectum treated by Electrolysis; by R. Newman, M.D.—Annual Report of the Public Gardens and Plantations of Jamaica; by D. Morris, M.A., F.G.S., Director.—Proceedings of the Society for Psychical Research.—The Infectiousness of Phthisis; by C. Denison, A.M., M.D.—Health Lectures for the People, No. IX.—Journal of the Scottish Meteorological Society.—What to do in Accidents and Sudden Illnesses; by Philip Foster, M.D.—Ekinokoksygdommen belyst ved Islandske Jægers Erfaring.—On Preventive Medicine in relation to the General Practitioner; by J. Wilkie Burman, M.D.Edin.—Eighteenth Annual Report of the Society for the Suppression of Vice.—A Handbook of General Treatment for Coolies; by C. J. Hancock, M.R.C.S., L.R.C.P., &c. (Peach, Bath.)—Longman's Magazine, No. I.—The Growth of Children; by Geo. W. Peckham.—Akklimatisations begrebet i dets Forhold til Gul Feber; af P. E. Kalmer, Landphisicus for St. Croix.—Dr. John Chapman's System of Neuro-dynamic Medicine; by Dr. B. O. Kinnear.—Influence of Light on the Development of Bacteria; by J. Jamieson, M.D.—Alcoholic Anæsthesia; by Dr. L. D. Mason.—Archives Italiennes de Biologie, tome 2.—Die Tuberculose in ihrer Anatomischen Ausbreitung; von Prof. H. Heiberg.—The Spinal Nerves (with Diagrams); by A. H. P. Leuf, M.D.—Tubercular Tumours of the Windpipe &c.; by J. N. Mackenzie, M.D.—Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Nov.—Knowledge, October.—Employment of Calcium Sulphide in the Treatment of Inflammatory and Suppurative Aural Disease; by Dr. S. Sexton.—The Search after Truth; by Dr. W. V. Drury.—Good Words, Sunday Magazine, Nov.—Index Medicus, Vol. IV., No. 9.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ALLEN, Mr. ALFRED H., has been reappointed Public Analyst for the Borough of Wakefield.

ALLEN, WILLIAM JOHN, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for the Audenshaw Urban Sanitary District, Lancashire, vice Slater, resigned.

BEITH, ROBERT, M.B., has been appointed Resident Assistant Medical Officer to the Western Infirmary, Glasgow.

CARDEN, JOHN CONDEL, L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator to the Milnethorpe Workhouse and District, vice Royle, M.D., resigned.

COVENEY, JAMES HENRY, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Prestwich Urban Sanitary District, Lancashire.

CROSS, F. RICHARDSON, M.B.Lond., F.R.C.S., has been appointed Surgeon to the Bristol Eye Hospital, vice Dr. Bartley, deceased.

DUNLOP, H. MELVILLE, M.B., C.M., has been appointed Resident Physician to the Sick Children's Hospital, Edinburgh, vice Skene Keith, M.B., C.M., resigned.

GETTINGS, JOHN SALTER, L.R.C.S.Ed., L.S.A.Lond., has been appointed Medical Officer to the Ogley Hay District of the Lichfield Union, vice D. E. Flinn, resigned.

GOFF, JOHN, M.B., has been appointed Resident Assistant Surgical Officer to the Western Infirmary, Glasgow.

HARDIE, JAMES, M.D., L.R.C.S.Ed., has been appointed Honorary Surgeon to the Manchester Royal Infirmary, vice Lund, resigned.

HILL, ALFRED BOSTOCK, M.D.Glas., L.R.C.P.Ed., has been reappointed Public Analyst for the Borough of Royal Leamington Spa.

HORSLEY, Mr. JOHN, has been reappointed Public Analyst for the City of Hereford.

MACLEHOSE, N. M., M.B., has been appointed Resident Assistant Surgical Officer to the Western Infirmary, Glasgow.

MARSHALL, JOHN N., M.B., has been appointed Resident Assistant Medical Officer to the Western Infirmary, Glasgow.

MASTER, GEORGE R., M.R.C.S., has been appointed Surgeon to the Jenny Lind Infirmary for Sick Children, Norwich, vice C. Firth, resigned.

PATTULLO, WM., M.B., has been appointed Resident Assistant Medical Officer to the Western Infirmary, Glasgow.

PERKINS, GEORGE STEELE, M.B., C.M., M.R.C.S., L.R.C.P.Lond., has been appointed Medical Officer and Public Vaccinator to the Littleham and Withecombe Districts of St. Thomas's Union.

PHILLIPS, EDWARD ENGLAND, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Rochford Rural Sanitary District, Essex.

POWELL, SCUDAMORE KYDLEY, M.D.Durb., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Madley Sub-District of the Dore Rural Sanitary District, Herefordshire, vice Evans, resigned.

RAMSAY, A. M., M.B., has been appointed Resident Assistant Medical Officer to Western Infirmary, Glasgow.

RANDLE, JAMES MAYNE, L.R.C.P.Lond., M.R.C.S., has been re-appointed Medical Officer of Health for the Ivybridge Urban Sanitary District, Devonshire.

RAWSON, EDWIN ELSWORTH, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Thornton Urban Sanitary District, Yorkshire.

ROBINSON, CHARLES WM., M.R.C.S., L.S.A.Lond., &c., has been appointed Medical Officer for the Tynemouth District.

ROPER, ARTHUR CHARLES, M.R.C.S., L.R.C.P.Ed., & L.M., has been elected Registrar to the West of England Eye Infirmary, Exeter.

SMITH, HEYWOOD, M.A., M.D., Physician to the Hospital for Women and to the British Lying-in Hospital, has been appointed Consulting Physician to the St. John's House Maternity Home.

SNADDEN, JAMES, M.B., C.M.Ed., has been appointed Medical Officer to the Fourth District of the Wortley Union.

STEWART, R. S., has been appointed Resident Assistant Surgical Officer to the Western Infirmary, Glasgow.

STUART, ERNEST OFFORD, L.R.C.P., L.R.C.S.Ed., has been appointed Assistant Medical Officer and Dispenser at the Infirmary of the Salford Union.

TESKEY, L., M.D., M.R.C.S., has been appointed Assistant Demonstrator of Anatomy in Trinity Medical College, Toronto.

WILKINSON, Mr. OSWALD, has been reappointed Public Analyst for the Borough of Stockport.

WOOD, A. J. M.B., has been appointed Resident Assistant Surgical Officer to the Western Infirmary, Glasgow.

WRIGHT, WILLIAM HENRY, M.K.Q.C.P.I., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Alvaston and Boulton Urban Sanitary District, Derbyshire, vice Ashby, whose appointment has expired.

Births, Marriages, and Deaths.

BIRTHS.

BYLES.—On the 26th ult., at Accrington, the wife of Henry Byles, M.B.Edin., of a son.

SMITH.—On the 27th ult., at Richmond-road, Barnsbury, N., the wife of Gilbert T. Smith, M.R.C.S., L.S.A.Lond., of a son.

WELCH.—On the 26th ult., at Victoria-park-road, the wife of Dr. S. Welch, of a son.

MARRIAGES.

BULTEEL—BABINGTON.—On the 16th ult., by licence, at the Parish Church, Northam, Marcus Henry Bulteel, L.R.C.P.L., M.R.C.S., of Buckingham House, Stonehouse, Devon, eldest son of Christopher Bulteel, F.R.C.S., to Ellen Grace, second daughter of Lieut.-Genera. J. H. M. Babington, Madras Staff Corps, of Conybeare, Northam' North Devon.

HANDYSIDE—MCNICOLL.—On the 26th ult., at the Parish Church, St. Helens, Lancashire, by the Rev. Henry Siddall, M.A., Vicar of Ashton-in-Mackerfield, Arthur Handyside, Surgeon, of Earlestown, to Emily, second daughter of Robert McNicoll, M.R.C.S., of St. Helens.

HETHERINGTON — JERVIS-WHITE-JERVIS. — On the 24th ult., at Felixstowe, by the Rev. H. Hetherington, Vicar of West Braddenham, Norfolk, George Haynes, L.R.C.P.Lond., M.R.C.S.E., L.S.A.Lond., eldest son of G. Hetherington, Esq., of Uxbridge, to Lucy Frances, second daughter of the late Colonel Henry Jervis-White-Jervis, R.A., of Felixstowe.

PLAYFAIR—MACDONALD.—On the 26th ult., at Christ Church, Claughton, Birkenhead, by the Rev. W. H. F. Robson, Vicar, Hon. Canon of Peterborough Cathedral, David Thomson Playfair, M.B., C.M.Edin., &c., of Bromley, Kent, to Catherine (Katie), third daughter of James Macdonald, Esq., of Eanerdale Lodge, Birkenhead-park.

WOLRIGE—KEATING.—On the 26th ult., at St. John's, Bathwick, Bath, Herbert E. R. Wolrige, M.R.C.S. & L.R.C.P., of East Knoyle, Wilts, son of the late James Wolrige, Esq., of Southsea, to Annie Louisa, daughter of Lieut.-Colonel A. Keating, Retired List Madras Army.

YOUNG—DAVY.—On the 24th ult., at Christchurch, Crouch-end, London, N., by the Rev. C. Edmonstone, Vicar, James Vance Young, M.D., M.Ch., L.S.A. Lond., only son of Robert Young, Esq., of Salters' House, Magherafelt, Co. Londonderry, to Mary Louisa (Marie), second daughter of the late Henry Davy, Esq., of Hornsey-lane, N., and formerly of Port Louis, Mauritius.

DEATHS.

BROUGHTON.—On the 14th ult., at his residence at Ambleside, Francis Broughton, Esq., F.R.C.S., late of H.M. Medical Service, Bombay, aged 62.

DUMOUCHEL.—On Sept. 25th, at St. Benoit, Quebec, the Hon. Dr. Dumouchel, aged 72.

KITCHENER.—On the 19th ult., at King-street, Bath, suddenly, Thomas Kitchener, M.D., aged 50.

PARNELL.—On the 28th ult., at Merchiston-avenue, Edinburgh, Richard Parnell, M.D., F.R.S.E., in his 73rd year.

REID.—At Newbiggin-by-the-Sea, John Campbell Reid, M.D. Glas., aged 67.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Nov. 2nd, 1882.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 27	29·41	E.	47	46	..	53	41	·16	Raining
,, 28	29·41	N.E.	49	48	..	50	45	·47	Raining
,, 29	29·64	W.	47	44	..	52	40	·22	Hazy
,, 30	29·92	W.	47	45	..	54	35	..	Overcast
,, 31	30·01	W.	45	44	..	57	40	·26	Hazy
Nov. 1	29·74	S.	56	51	..	59	47	..	Overcast
,, 2	29·84	W.	52	50	..	60	45	..	Cloudy

Medical Diary for the ensuing Week.

Monday, Nov. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. General Meeting.—Mr. Edmund Owen, "On Two Cases of Congenital Cystic Hygroma" (living specimen).—Mr. Sampson Gamgee (of Birmingham), "On the Treatment of Wounds and Fractures."

Tuesday, Nov. 7.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Traumatic Hæmatoma of Vertebral Column; Meningocele Simulating Nasal Polypus; Disseminated Sarcoma; Xanthoma Tuberosum (with microscopical specimens); Pigmentation of the Cervix Uteri; Double Hydrosalpinx; Renal Calculus in a Child; Lung with Impacted Foreign Body; Ulceration of Vermiform Appendix in Typhoid Fever; Sarcoma of Bladder and Prostate.

Wednesday, Nov. 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—SKIN Department: 1.45 P.M., and on Saturday at 9.15 A.M.

HUNTERIAN SOCIETY.—7.30 P.M. Council Meeting.—8 P.M. Dr. Stephen Mackenzie: 1. "On a Case of Hemianopsia with Hemiplegia;" 2. "On Paroxysmal Hæmaglobinuria."—Dr. Coxwell, "On Demonstration of Reflexes in a Case of Hemiplegia."

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. T. B. Rossiter, "On Observations on Stephanoceros."—Dr. Maddox, "On some Organisms found in the Excrement of the Goat and the Goose."

Thursday, Nov. 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, Nov. 10.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—Mr. Golding Bird, "On a Case of Removal of the Uterus for Fibroid Disease" (specimen shown).—Mr. Clutton, "On a Case of Spina Bifida."—Mr. C. Heath, "On a Case of Separation of the Epiphysis of the Clavicle by Muscular Action."—Dr. Goodhart, "On Six Cases of Diphtheria treated by the Local Application of Borax or Boracic Acid."—Mr. Golding Bird will Exhibit a Case of Transpatellar Excision of the Knee.

Saturday, Nov. 11.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

TO SUBSCRIBERS.

IN order that no encroachment may be made on the usual contents of our number by the publication this week of Dr. Richardson's elaborate Report on the Sanitary Condition of Brighton, we have increased the size of our current issue to the extent of sixty-four columns. THE LANCET of the present week therefore consists of 112 pages.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"TETANUS FOLLOWING VACCINATION."

DR. H. J. BERKELEY records in the *Maryland Medical Journal* a case headed as above. The patient was a man aged forty, tall, and healthy-looking. Some days after the operation, which was performed about the middle of January last, he exposed himself to severe cold, and the arm became much swollen, and the integument around the scab inflamed. No other lesion could be detected anywhere in the body. On February 7th he noticed a little stiffness of the jaw, and there was slight opisthotonos, accompanied on the following day with profuse perspirations and muscular spasms of the lower extremities. These symptoms increased in severity till the 13th, on the evening of which day death took place, the pulse at noon having been 120, the respiration 44, and the temperature 102°. The treatment throughout was by chloral hydrate and kalium bromide. Constipation was persistent during the entire illness, and was occasionally relieved by an enema. Dr. Berkeley acquits the virus of any share in the fatal result in this case, the "lesions of the peripheral nerves involved in the inflamed tissue probably being the immediate factor."

Dr. Tarleton, G. P., and others.—We strongly disapprove of the circulation of the post-cards referred to.

"THE DANGERS ATTENDING SHAMPOOING."

To the Editor of THE LANCET.

SIR,—The article in your journal of Saturday last has, I am happy to say, created much comment upon a very important subject. As, however, the inquiries here are both frequent and searching, it has occurred to me that the uninitiated, and especially our foreign patrons, may construe the matter to the disadvantage of this company.

I hope, therefore, you will allow me to state that you correctly describe our arrangements when you say "In one of the most celebrated West-end houses we noted that the pipes from the basins all led on to the roof of an out-house, and there the soapsuds and water travelled some four or five yards in the open air before entering the waterspout. A back current could, therefore, only bring in air from the roof, that is, air as pure as any to be had in London."

I may add that the system of water-supply and waste at this establishment is under weekly supervision.

I remain, Sir, your obedient servant,

Old Bond-street, London, Nov. 1st, 1882. H. P. TRUEFITT.

*** We have likewise received a communication from Mr. Robert Douglas, of Bond-street, in which he asks us to state that every basin in the gentlemen's room in his establishment delivers into an open courtyard and into the open air; one waste pipe above a trap, and another under what is called a ventilated trap. Thus no sewer-gas or air from the drains can pass up the main waste-pipe and along the tributary pipes leading to the several basins. There is even a more thorough disconnexion in the case of the waste from the ladies' basins, for there the main waste-pipe delivers into a large hopper, close to the exterior of the window.—ED. L.

A LESMAHAGOW GEOLOGIST.

THE death, about three weeks ago, of Mr. Robert Slimon, surgeon, Lesmahagow, has removed one of those self-educated, enthusiastic men of science, who seem in a manner indigenous to Scotland. Mr. Slimon began his working life as a hand-loom weaver in Douglas. From Douglas he removed to Cumnock, where he entered on the trade of a fancy box maker. After spending some time in Cumnock he went to Glasgow, and obtained a situation in a druggist's shop. While serving as a druggist, Mr. Slimon entered the medical classes in the University, and obtained the licence of the Faculty of Physicians and Surgeons. He then left Glasgow for Lesmahagow, where he settled down, and spent a long, busy, and respected life. From his earliest days Mr. Slimon was a close observer of nature. While yet little more than a boy he became interested in the study of geology, and this study he was enabled, after his migration to Lesmahagow, to pursue with much success. His researches, indeed, into the upper silurian system were rewarded by the discovery of the crustaceans in the rocks of this system, a discovery which has made his name celebrated in the annals of geology. His collection of these crustaceans was altogether unique. Sir Roderick Murchison, who was a frequent correspondent of Mr. Slimon's, inspected it with great care and interest, and made special mention of it at the '54 meeting of the British Association in Glasgow. In addition to his silurian crustaceans, Mr. Slimon possessed an extensive palæontological collection of the flora and fauna of the carboniferous rocks of the parish of Lesmahagow, and this collection he utilised, in some measure, in his "Geological Account of Lesmahagow," a monograph which, while limited as to its scope, is a model of minute and exact research. Mr. Slimon was, many years ago, elected a corresponding member of the Geological Society of London, a distinction in regard to which he manifested a very pardonable measure of gratification, and even pride. At his death, Mr. Slimon had attained the mature age of seventy-four years.

Mr. Chavasse.—Thanks. The reports will be acceptable.

F. A. M.—A month's notice.

ON THE INTERNAL ADMINISTRATION OF CHRYSOPHANIC ACID IN PSORIASIS.

To the Editor of THE LANCET.

SIR,—Since the publication of Dr. Napier's interesting article on the above subject, which appeared in your columns of May 20th, I have given this drug an extensive trial, and have been remarkably struck with the result.

In the first case in which I tried it its action proved so rapid and effective that I think it worthy of record in connexion with the other cases that have been brought forward. A young, delicate lad, fourteen years of age, came to me with well-marked psoriasis of five years' standing. The abdomen and chest were covered with numerous rings about the size of a florin. The upper and lower extremities were also affected; the patches were here, however, much smaller and less numerous. I ordered him one-fifth of a grain of the acid three times a day in sugar of milk, with directions to take the powders about half an hour after meals. No external application of any kind was given. I saw him the following week. Some of the patches were beginning to fade, whilst a few had actually disappeared. The following week those on the chest had entirely died away; the others were fading quickly, especially those on the belly. At the end of the third week he was practically cured, only a few small spots remaining on the arms and legs. He continued the medicine (one-tenth of a grain) for a month afterwards, and, as I have not seen him since, I conclude there has been no return. The dose (one-fifth of a grain) was not increased throughout. The boy never complained of any nausea or sickness, or any other ill-effects from the use of the drug, so common when larger doses are given.

I have tried it in several other cases with marked benefit, but not with such success as in the case mentioned. I have generally begun with one-fifth of a grain, and have rarely exceeded that amount, having found that where the smaller dose failed to do good a larger dose was equally ineffectual. I have also noted the fact that the disease is more amenable to treatment when occurring in strumous cachectic patients than in those of a stronger and healthier constitution.

I am, Sir, yours, &c.,

F. W. CLIFTON, M.R.C.S. Eng.

Easy-row, Birmingham, Oct. 31st, 1882.

Dr. D. W. Corfield.—The list was published in our last issue.

Mr. Gordon Holmes.—Yes.

"PERFORATING ULCER OF FOOT AND LOCOMOTOR ATAXY"

To the Editor of THE LANCET.

SIR,—Out of three well-marked cases of locomotor ataxy which I have had considerable opportunities of observing, one had an intractable abscess situated over the outer tarso-metatarsal joints of the left foot on the dorsum. This was open for the last two years of the man's life. It certainly could not come under the title of perforating ulcer, but I always connected it with the nerve affection in my own mind.

I am, Sir ours, &c.,

October 30th, 1882. E. E.

HOSPITALISM AND PUERPERAL SEPTICÆMIA.

A CORRESPONDENT says that, having practised for some years near a provincial hospital, he has been continually struck with the fact that all people dying during or soon after their confinements have been attended by some one of the surgeons on the staff of the hospital. It is undoubtedly true that hospital surgeons, especially those practising midwifery, need to take special precautions in the way of cleanliness and antisepticism. But is it not hospital surgeons to whom we are mainly indebted for the science of antisepticism and the practice of it? We think there is something partial in the observation of our correspondent; but hospital surgeons who are also obstetric practitioners will not blame us for directing attention to the point raised, and for advising rigid care, cleanliness, and antisepticism.

James Ross, M.D.—It is most unreasonable to be required to give receipts without at the same time being paid. There can be no justification of such a system. The facts given prove its unsoundness, and should be forwarded to the higher authorities if the fees are not quickly forthcoming.

Mr. W. A. Gilligan.—Dunglison's (Churchill).

"THE USE OF THE FORCEPS IN MIDWIFERY."

To the Editor of THE LANCET.

SIR,—In reference to the letter of your correspondent, Mr. R. A. Rugg, permit me to make a few remarks in regard to the manner in which that gentleman draws his conclusions as to the necessity of using forceps in labour, and from which, as a standpoint, he would seek to criticise others.

Mr. Rugg asserts that he has used forceps in 12 cases out "of the last 400" attended by him, and that "half of these cases might have terminated without the use of forceps." He also states that he is "not at all addicted to the use of instruments where they can possibly be avoided." This seems like a contradiction, as stating no condition of labour indicating the use of forceps, he thus acknowledges himself, judged from his own standpoint, "addicted" to "meddlesome midwifery."

In regard to Mr. Rugg's "rule of practice not to wait more than three hours when there is no advance in the second stage of labour," it seems to be a rule more suited to his convenience than that of the patient; and if Mr. Rugg adheres to this rule in his next 400 cases he attends he will use forceps many times when it is neither "necessary nor desirable" so to do. Mr. Rugg ought to know that time is a very unsafe guide in determining how long labour should remain unassisted in the second stage, and that many labours prolonged in the second stage may terminate satisfactorily without interference. On the other hand, it would in some cases be injudicious for one experienced in obstetrics and in the use of the forceps to allow the patient to exhaust herself for anything like three hours before delivery.

It is not, however, my intention to discuss the indication for, or the benefits which arise from, the timely use of forceps in the hands of a skilful person, but merely to hint at some of the sources of fallacy which may have prejudiced the use of instruments in Mr. Rugg's estimation, and which his confessedly small experience of them has failed to remove.

I would refer Mr. Rugg to the works of modern writers on the subject of the forceps, the perusal of which, I feel sure, would void his mind of the ancient prejudice, and satisfy him that the most potent arguments of its opponents are founded upon imperfect and limited experience, or cases in which, through delay in its application, the mischief had in all probability already taken place.

As Mr. Rugg takes exception to the forceps proportion of the master of the Rotunda, I would remind him that one is scarcely justified in estimating the necessity for forceps in such an institution by comparison with the statistics of his own cases in private practice, the circumstances being so widely different, as they are even in comparing one practice with another.—I am, Sir, yours truly,

Britannia-terrace, Kensal-road, W., ISAAC WILLIAMS.
Oct. 23rd, 1882.

Psychologist.—There were four generations of Monroes. There is a portrait of Dr. Edward Thomas Monro in the dining-room of the Royal College of Physicians; it was painted by his son, Dr. Henry Monro.

"TESTIS IN PERINEO."

To the Editor of THE LANCET.

SIR,—I venture to ask for space to record another instance of the above in a child one month old, brought to the out-patient department of this hospital, and seen by Mr. Sansome (hon. surgeon) and myself. The mother brought it as "ruptured." The right half of the scrotum seemed longer than the left, was flaccid, and contained no testis. This was felt in the perineum, a little below the junction of the scrotum. It was noticed some days after birth. Mr. Sansome proposed a similar procedure to that suggested in THE LANCET of October 21st—viz., the subcutaneous division of the separating membranes; but the child, like its testis, has wandered, and sought some other course.

I am, Sir, yours truly,
F. F. GERMAN, House-Surgeon.

The District Hospital, West Bromwich,
Oct. 27th, 1882.

PITYRIASIS NIGRA.

DR. PRATT thinks that, after all, the case to which he referred in a note under the heading "A Query" may be one of pityriasis nigra, and directs attention to an instance somewhat similar which occurred in the practice of Mr. Teevan, and was brought under the notice of the Royal Medical and Chirurgical Society in 1845, the report of which appears in THE LANCET of July 12th of that year.

A Collector.—There is a portrait of Dr. Thomas Fuller prefixed to his Pharmacopœia Domestica. He wrote the following lines on a left-handed writing master:—

"Though Nature thee of thy right hand bereft,
Right well thou writest with the hand that's left."

Mr. Cauty's paper is marked for insertion.

UNQUALIFIED PRACTICE BY MEDICAL STUDENTS IN GLASGOW.

To the Editor of THE LANCET.

SIR,—In the interest of the community, as well as the medical profession, I should like to draw your attention to a few facts in reference to a system carried on here. Some time ago the trustees of Anderson's College thought that they would increase the popularity of their medical school if they were to give outside practice to their students. With this no one could find fault if confined within certain limits, but it has been otherwise, and has become a serious hurt to the people, as well as to the general medical practitioner. It seems anyone leaving name and address at their dispensary may have out-door attendance. Hundreds who are quite able to pay both for attendance and medicine take advantage of this. This of itself is not the worst feature of the practice, but that young men just commencing to study (youths who have not passed their first professional examination) should be sent out to visit and to undertake the treatment of the most delicate and serious ailments, is not altogether free from danger, and confers a doubtful benefit upon the unfortunate sufferers. The most grievous part of the practice, however, is that some of these young men open up drug shops and visit for the dispensary, and in the district in which they illegally set up their shop induce people to go there for medicine as well as for advice, and, under the pretence of doing work for the dispensary, advertise themselves (verbally) as doctors, and thus obtain profit for their labour. Is this not allowing quackery in its very worst form, as the people are under the belief that they are having the gratuitous advice and attendance of *bond fide* medical men?—I am, Sir, yours respectfully,

October 23rd, 1882. GLASGOW.

Surgeon.—The election of Fellows into the Council of the College of Surgeons is vested entirely in the Fellows. Members have no share in it. There are, according to the last published Calendar of the College, 1186 Fellows and 16,093 Members of the College, making a total of 17,279 Fellows and Members.

Mr. F. W. Strugnell will find the correction made on page 734 in our last issue.

CASE SIMULATING HARE-LIP.

To the Editor of THE LANCET.

SIR,—The following case may be deemed of sufficient interest for insertion in your pages.

Being called to see C. H——, ten months old, on August 5th, about 12.30 P.M., I found a severe cut on the upper lip, extending through the septum of the nose right through the lip. This accident occurred as follows:—The foot of an iron bedstead went through the flooring of the bedroom and upset some ornaments that were on the mantlepiece close by. On examination I found that the wound was quite through, and sloping rather to the left side, and that she could take the breast very well. The wound was put together by means of two silver sutures, and adhesive plaster was applied to give it a better support. One suture, nearest to the nose, was removed on the tenth day; the other was left till the fifteenth day, when it was removed, and has left hardly a mark to be seen.

The points of interest in this case are—(1) there was very little hæmorrhage, (2) the child could suck all along, and (3) the rapid recovery.

I am, Sir, yours, &c.,
Dulan, Oct. 1882. W. E. WILLIAMS.

M.R.C.S.—Such shabbiness we should hope is not common. There may, however, be some reason for it, which time will explain.

D. H. R.—No card enclosed.

"INUNCTION IN SCARLATINA."

To the Editor of THE LANCET.

SIR,—"Cutis" asks for information regarding the very valuable mode of treatment by inunction in scarlatina. Since Dr. Taylor's paper, in THE LANCET of 1849, many have used inunction with marked satisfaction to themselves and patients, and, so far as I ever heard, with no injury to the kidneys of the latter. If "Cutis" refers to me he will find the information he seeks regarding hamamelis.

I am, Sir, yours, &c.,
MEDICAL DIGEST (Section 80: 4 & 361.1).

Boundary-road, N., Oct. 30th, 1882.

THE POSTAL MICROSCOPICAL SOCIETY.

WE understand this society is still in existence. The secretary is Alfred Allen, Esq., Bath.

Bibliopole.—The surgical writings of John of Ardern are scarce and valuable. There is one in manuscript in the British Museum; there was also one in the library of Dr. Mead, and there is one which belonged to Queen Mary, afterwards in the library of Mr. Towers, of Essex. When Mr. South was President of the College of Surgeons he had one translated for the library, where it may be seen on applying to Mr. Chatto, the librarian.

T. M.—The studentships in Human and Comparative Anatomy have long since been abolished at the College of Surgeons, no election having taken place since 1855.

"HAMAMELIS VIRGINICA."

To the Editor of THE LANCET.

SIR,—I cannot give your correspondent, "C.," any information regarding the tincture of hamamelis, not having used it; but I can speak most highly of hazeline, the active principle of the witch hazel. I have prescribed hazeline as an injection (twice daily) in several cases of hæmorrhoids with most satisfactory results, relieving cases that had resisted all other treatment. It does not cause pain; on the contrary, relieves all unpleasant symptoms.

Hazeline was highly recommended two years ago for cases of hæmoptysis, epistaxis, melæna, &c.; but administered internally it has disappointed me in such cases. As a local application I have never known it fail, and I consider it invaluable as such in the treatment of indolent and varicose ulcers, &c. Injected into the nostrils in that common complaint, "cold in the head," it gives immediate relief.

While the correspondence on the "abortive treatment of gonorrhœa" was being carried on in THE LANCET I had opportunity of using hazeline as an injection in a case of "old gleet," and was agreeably surprised to find that, after a few injections, my patient was cured. I also had the opportunity of using it in the early stage of gonorrhœa, and with good result; and I believe that if any of your readers who may have more opportunity should give the drug a fair trial they will not be disappointed with the "abortive treatment of hazeline" when using hazeline as an injection. A glass syringe should be used; metals decompose hazeline.

I am, Sir, yours truly,

Chesterfield, Oct. 30th, 1882. W. S. SYMES.

A Provincial F.R.C.S.—The number of Fellows of the Royal College of Surgeons whose addresses are known, residing in London and within a radius of ten miles from the General Post-office, is about 440. Upwards of eighty Fellows appear in the College Calendar with no address to their names.

Theta.—In the absence of any expressed wish of the patient to the contrary, the case should be handed over to the ordinary medical adviser.

REMOVAL OF HAIR FROM THE FACE.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers help me under the following circumstances? One of my patients has a large tuft of thick hair occupying a prominent position upon the face, and which it is very desirable to get rid of permanently. Depilatories have been had recourse to without affording any satisfaction, and latterly epilation has been tried, with no better result. The individual hairs are extracted easily enough, but as their bulbs cannot be induced to accompany them, a fresh capillary crop takes the place of the one just reaped.

Any treatment that has acted well in a similar case, or one that theoretically holds out a prospect of doing so, will be heartily welcomed by

A PUZZLED PRACTITIONER.

October 24th, 1882.

HYSTERIA.

To the Editor of THE LANCET.

SIR,—Can you or any correspondent kindly inform me of any charitable institution where the "Weir Mitchell" treatment of hysteria is carried out? A small payment might perhaps be arranged for.—Yours truly,

October 30th, 1882. R. W. JOLLYE.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir William MacCormac, London; Mr. Lawson Tait, Birmingham; Mr. Roger Williams, London; Mr. Collyer; Dr. Hughes Bennett, London; Dr. J. A. Campbell, Garlands; Mrs. Gothard; Messrs. Nichols and Co., London; Mr. Chavasse, Birmingham; Mr. Harris, Norwood; Mr. German, West Bromwich; Dr. Pratt, Appledore; Mr. Laurent, Bedford; Dr. Collier, London; Mr. Reece, London; Mr. B. Shillitoe, London; Mr. Briscoe, London; Mr. M'Mann, London; Mr. Berry, Wigan; Mr. Christopher Heath, London; Mr. Crumble, Brighton; Mr. Rochfort, Chesterfield; Mr. Williams, Portsmouth; Dr. Sinclair Thomson; Mr. Savory, London; Dr. Caddy, London; Mr. Barraud, London; Mr. W. E. Lloyd, Bristol; Dr. Hudson, Leeds; Mr. Beacon, Esher; Dr. Eastwood, Darlington; Messrs. Waugh and Co., London; Mr. Bennett, Liverpool; Messrs. Ure and Co., Toronto; Mr. Hall, Blackpool; Mr. L. Bullock, London; Mr. Brown, Westgate-on-Sea; Mr. Bullvant, Derby; Dr. Creery, Dinapore; Dr. Corfield, London; Mr. Shaw, Ayr; Mr. Clarke, Aberfeldy; Mr. Woodcock, Bradford; Dr. Schmitz, Neuenahr; Mr. Clifton, Birmingham; Dr. E. G. Barnes, Eye; Dr. Corfield, London; Mr. Symes, Chesterfield; Mr. Cameron, Stroud; Mr. R. Douglas; Mr. Harding, Leeds; Mr. Jalland, York; Dr. Maxwell; Dr. Leonard Sedgwick; Mr. Reginald Harrison, Liverpool; Dr. Hatton, Hartshill; Dr. Eshelby, Frocester-court; Mr. Bain, Dundee; Mr. Hosker, Bournemouth; Mr. Tarleton; Mr. Roberts, London; Mr. Shuttleworth, San Remo; Mr. Truman, Nottingham; Mr. Nutra, London; Asinus; Fornix; M.D.; Septicæmia; M.R.C.S.; M.D., Carlisle; Medicus B.; M., Uxbridge; P. D., Oldham; W.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lake, Plymouth; Mr. Kirkpatrick, Woodbridge; Mr. Quinton, Norwich; Mr. Hay, St. Helens; Mr. Crompton, Bury; Messrs. Beal and Co., Brighton; Mr. Earlam, Abbott Bromley; Mr. Eschwege, London; Mr. Noakes, Exeter; Mr. Hyatt, Shepton Mallet; Mr. Young, Bray; Mr. Whitford, London; Mr. Coates, Southsea; Mr. Hetherington, Ipswich; Mr. M'Dougal, Droreay; Dr. Roberts, Sheffield; Mr. Hicks, Hendon; Messrs. Ball and Co.; Mr. Cattley, Preston; Mrs. Carter, Bristol; Dr. Coombs, Castle Cary; Mr. Darke, London; Mr. Waite, Bayswater; Mr. Millican, Warwick; Mr. Frampton, Weston-super-Mare; Mr. Phillips, Seole; Mr. Lake, Gravesend; Mr. White, Bayswater; Dr. Dobell, London; Mr. Sarkie; Mr. Simpson, Dungannon; Mr. Garrod, Mexborough; Mr. Harrison, Sherburn; Mr. Heyworth, Rawtenshaw; Messrs. Keith and Co., Edinburgh; Dr. Low, Norwich; Mr. Woodland, London; Miss Armitage, Nottingham; Mr. Roberts, Alfreton; T. K.; E. J., Tring; F. B. F., Dunstable; H. H.; G. V. D.; Medicus, Dublin; H. B., Nottingham; Lancet, Chesterfield; J. H. R., Whitehaven; Physician, Holborn; Beta, Manchester; S., Arlo; T., Oldham; J. G.; J. M. J.; Tenax, Liverpool; D., Blackwater; A. B., Walton; Miss H., Southport; Dispenser, London; C. B. A.; Lex, Manchester; Superintendent, Seaford; Surgeon, Bury St. Edmunds; Mentone, London; A. B., South Bank; S. W.; Medicus, Bowlas; &c. &c.

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